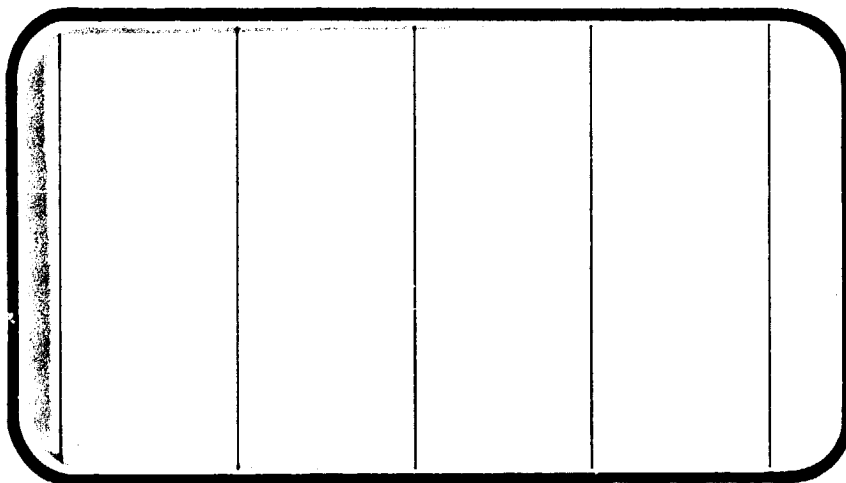


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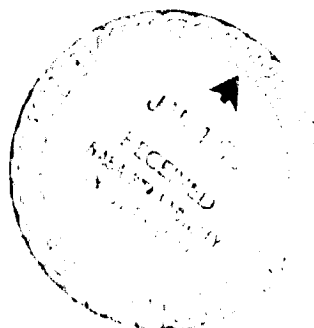
(NASA-CR-134434) TRIPLE BALANCE TEST OF THE
PRR BASELINE SPACE SHUTTLE CONFIGURATION ON
A .004 SCALE MODEL OF THE MCR 0074 ORBITER
CONFIGURATION IN THE MSFC 14 X 14 INCH
TRISONIC WIND TUNNEL (TWT 570) [IA31F(B)],

N75-14810

Unclas
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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANAGEMENT services

SPACE DIVISION

CHRYSLER
CORPORATION

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VOLUME 1 OF 2

TRIPLE BALANCE TEST OF THE PRR BASELINE
SPACE SHUTTLE CONFIGURATION ON A .001 SCALE
MODEL OF THE MCR 0074 ORBITER
CONFIGURATION IN THE MSFC 14 x 14 INCH
TRISONIC WIND TUNNEL (TWT 570) [IA31F(B)]

By

Paul Ramsey, NASA/MSFC and Tommy Davis, NSI

Prepared under NASA Contract Number NAS9-13247

by

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Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division
Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

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NASA Series No.: IA31F(B)
Date: 4/13/74-4/30/73 and 6/26/73-6/28/73
Occupancy Hours: 180

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TRIPLE BALANCE TEST OF THE PRR BASELINE SPACE SHUTTLE
CONFIGURATION ON A .004 SCALE MODEL OF THE MCR 0074 ORBITER
CONFIGURATION IN THE MSFC 14 x 14 INCH TRISONIC WIND TUNNEL (TWT 570)
[IA31F(B)]

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ABSTRACT

A wind tunnel force and moment test of the Space Shuttle launch vehicle was conducted at the Marshall Space Flight Center 14 x 14 Inch Trisonic Wind Tunnel. The orbiter configuration was a .004 scale model of the MCR 0074 (PRR Baseline). The wind tunnel model utilized a triple balance such that component aerodynamics of the Orbiter, External Tank and Solid Rocket Booster could be obtained. The test was conducted at an angle of attack range from -10° to 10° , an angle of sideslip range from -10° to 10° and a Mach number range from .6 to 4.96.

In addition to the static stability data, other runs were made to identify key simulation parameters to be used in future launch vehicle wind tunnel tests. The following parameters were investigated:

- Effect of Orbiter - ET attach hardware
- Model attachment (spacer) effects
- Effects of "grit" on model leading surfaces
- Model misalignment effects

The effect of External Tank nose shape was also studied by investigating five different nose configurations.

This report has been divided into two volumes arranged as follows:

Volume 1 - All plotted data.

Volume 2 - All tabulated data.

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CY, CYN, CBL vs. BETA
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NOMENCLATURE

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; ft/sec
M	MACH	Mach number
P		pressure; psi
q	Q(PSI)	dynamic pressure; psi
RN/L	RN/L	unit Reynolds number; per ft
V		velocity: ft/sec
α	ALPHA	angle of attack of reference body; deg
β	BETA	angle of sideslip of reference body; deg
δ	DELTA	inclination of orbiter base, degrees
ψ	PSI	angle of yaw of reference body; deg
ϕ	PHI	angle of roll of reference body; deg
i_0	ORBINC	incidence angle between orbiter and external tank centerlines; deg
x		horizontal separation distance between orbiter and tank aft attach points; in.
z	DELTAZ	vertical separation distance between orbiter and tank aft attach points; in.
x,y,z		right-handed coordinate axis system
X,Y,Z		model stations, positive in the same directions as the x, y, z axis system except for Z, which is positive in the negative direction of z; in.
SRB		Solid Rocket Booster
T		temperature; °F
ET		External Tank

NOMENCLATURE (Continued)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
F_A		axial force (AF), positive in the negative direction of x; lb
F_N		normal force (NF), positive in the negative direction of z; lb
F_Y		side force (SF), positive in the positive direction of y; lb
M_x		rolling moment (RM); a moment about the x-axis (a positive rolling moment tends to rotate the positive y-axis toward the positive z-axis); in.-lb
M_y		pitching moment (PM); a moment about the y-axis (a positive pitching moment tends to rotate the positive z-axis toward the positive x-axis); in.-lb
M_z		yawing moment (YM); a moment about the z-axis (a positive yawing moment tends to rotate the positive x-axis toward the positive y-axis); in.-lb

REFERENCE, C.P. AND C.G. DEFINITIONS

A_b		base area; in. ²
b	BREF	wing span or reference span; in.
c.g.		center of gravity; in.
l_{BODY}		body length; in.
l_{REF}	LREF	reference length; in.
\bar{c}		wing mean aerodynamic chord; in.
s	SREF	wing area or reference area; in. ²
BMC		balance moment center

NOMENCLATURE (Continued)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
MRP	MRP	moment reference point
XMRP	XMRP	moment reference point on X axis; in.
YMRP	YMRP	moment reference point on Y axis; in.
ZMRP	ZMRP	moment reference point on Z axis; in.
c.p.		center of pressure
$X_{CP/\ell}$	XCP/L	center of pressure location based on body length; $\frac{X_{c.g.}}{\ell_{BODY}} - \frac{C_{m_m}}{C_{N_m}} \frac{\ell_{REF}}{\ell_{BODY}}$
$Y_{CP/\ell}$	YCP/L	center of pressure location based on body length; $\frac{X_{c.g.}}{\ell_{BODY}} - \frac{C_{n_m}}{C_{Y_m}} \frac{\ell_{REF}}{\ell_{BODY}}$

COEFFICIENTS (MISSILE AXIS SYSTEM)

C_{A_m}	CA	axial force; $F_A/q_\infty S_{REF}$
$C_{A_{b_m}}$	CAB	base axial force; $(P_{\infty} - P_b) A_b/q_\infty S_{REF}$
$C_{A_{f_m}}$	CAF	forebody axial force; $C_A - C_{A_b}$
C_{ℓ_m}	CBL	rolling moment; $M_x/q_\infty S_{REF} b_{REF}$
C_{m_m}	CLM	pitching moment; $M_y/q_\infty S_{REF} \ell_{REF}$
C_{N_m}	CN	normal force; $F_N/q_\infty S_{REF}$

NOMENCLATURE (Concluded)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
C_{n_m}	CYN	yawing moment; $M_z/q_\infty S_{REF} b_{REF}$
C_p	CP	pressure coefficient; $(P_1 - P_\infty)/q_\infty$
C_{Y_m}	CY	side force; $F_y/q_\infty S_{REF}$
C_{n_β}	CYNBET	yawing moment coefficient derivative with beta
C_{y_β}	CYBETA	side force coefficient derivative with beta
$C_{N_{\alpha=0}}$	CNAFO	normal force coefficient at an alpha of zero degrees
$C_{A_{B_{\alpha=0}}}$	CABAFO	base axial force coefficient at an alpha of zero degrees
$C_{m_{\alpha=0}}$	CLMAFO	pitching moment coefficient at an alpha of zero degrees
$C_{A_{f_{\alpha=0}}}$	CAFAFO	forebody axial force coefficient at an alpha of zero degrees
$C_{N_{TOTAL}}$	CNT	normal force coefficient for the total vehicle
$C_{M_{TOTAL}}$	CLMT	pitching moment coefficient for the total vehicle
$C_{Y_{TOTAL}}$	CYT	side force coefficient for the total vehicle
C_{N_α}	CNALFA	normal force coefficient derivative with alpha
C_{m_α}	CLMALF	pitching moment coefficient derivative with alpha
	SPACER	spacer number listed as fore and aft spacers separated by a decimal
"D"	SPADIA	spacer diameter
GAP	SPAGAP	spacer gap
<u>SUBSCRIPTS</u>		
b		base
l		local
s		static conditions
t		total conditions
∞		freestream
REF		reference
BODY		body reference
m		missile axis
AVE		average

INTRODUCTION

Tests were conducted in the MSFC 14 x 14 inch Trisonic Wind Tunnel to determine static stability data for each component of the Space Shuttle in the launch configuration. Force and moment data were obtained at Mach numbers of .6, .8, .9, 1.05, 1.25, 1.46, 1.96, 2.99, 3.5, 4.0 and 4.96. Actual test conditions are shown in TABLE I. System angle of attack (α) was varied between -10° and $+10^\circ$. System sideslip angle (β) varied from -10° to $+10^\circ$ while α was held at -5° , 0° and 5° . TABLE II contains the run schedule showing all runs made.

Because each model was mounted on a separate sting, sting deflections and thus relative positions of each model were changing during each run. An existing computer program (Reference 1) was used to interpolate all data to nominal values of the separation distance, z , and the incidence angle, i_0 , of the orbiter with respect to the External Tank. Photographs of the model installation are shown in Figures 1 through 4.

Studies were also made during this test to determine the effects of Orbiter-External Tank attach hardware and Orbiter-External Tank model support hardware by making runs with and without the above mentioned items. The support hardware study was quite extensive with several different diameters and locations of the supports being tested. The results of varying these parameters and other parameter variations tested during a following test (TWT-573) are presented under a separate cover (Reference 2).

The interpolated data from this test were used together with force and moment measurements on the composite vehicle from TWT 566 and pressure

data on the composite vehicle (TWT 567) to produce a complete data package for the launch vehicle (Reference 3).

The test was assigned a test number of TWT 570 and a NASA series number of IA31F(8). Project engineers for the test were Paul Ramsey of NASA/MSFC and Tommy Davis of Northrop Services, Inc.

CONFIGURATIONS INVESTIGATED

Test results were obtained on a .004 scale model of the 0074 PRR Baseline Launch Configuration. Each of the model components tested are listed below. Pertinent dimensional data for these components are given in Table 3.

<u>MODEL COMPONENT SYMBOL</u>	<u>DESCRIPTION</u>
03	PRR Baseline Orbiter less abort Solid Rocket Motors (B1) (C5D7F4M3) (W87E18) (V5R5).
T9	1.296-inch diameter External Tank with 2.4 inch radius ogive nose.
T7	1.296-inch diameter External Tank with 2.4 inch radius ogive nose and a .556 inch long nose spike.
T10	T9 External Tank with 7/8 inch sting instead of standard 5/8 inch sting.
T11	1.296-inch diameter External Tank with 4.82 inch radius ogive nose.
T12	1.296-inch diameter External Tank with triconic nose.
T13	1.296-inch diameter External Tank with quadraconic nose.
S3	.568-inch diameter Solid Rocket Motor with 18° nose cone.
U5	Aft interstage structure consisting of tie-downs among tank, orbiter and SRB's.
Y1E	spacer attached to ET, both fore and aft.
Y2E	spacer attached to ET at forward position only.
Y3E	spacer attached to ET at aft position only.

<u>MODEL COMPONENT</u>	
<u>SYMBOL</u>	

Y10	spacer attached to orbiter, both fore and aft attach points.
Y20	spacer attached to orbiter at forward position only.
Y30	spacer attached to orbiter at aft position only.

The orbiter had no rudder flare or elevon deflection. The Launch Configuration models are mounted on the MSFC Parallel Staging Mounting System with the orbiter, external tank and SRB's on separate stings. Data were recorded by the separate balances for the following configurations:

ORBITER BALANCE

<u>Configuration</u>	<u>Orbiter in Presence of:</u>
(03)/(T9)/(S3/2)/(S3/2)	T9 external tank with SRB's present but not attached.
(03)/(T9)/(U5)/(S3/2)/(S3/2)	T9 external tank with attach hardware and both SRB's present but not attached.
(03)/(T9)/(S3/2)/(S3/2) Y1E	T9 external tank with spacers attached to ET both fore and aft. Both SRB's are present but not attached.
(03)/(T9)/(S3/2)/(S3/2) Y1EG	Same as above with grit applied to models.
(03)/(T9)(U5)/(S3/2)/(S3/2) Y1E	T9 external tank with spacers attached to ET both fore and aft, and attachment hardware on ET. Both SRB's are present but not attached.
(03)/(T9)(U5)/(S3/2)/(S3/2) Y2E	Same as above with spacer attached only in forward position.

ConfigurationOrbiter in Presence of:

(O ₃)/(T ₉)/(S _{3/2})/(S _{3/2}) Y3E	T ₉ external tank with spacers attached to ET in aft position only. Both SRB's are present but not attached.
(O ₃)/(T ₉)/(S _{3/2})/(S _{3/2}) Y10	T ₉ external tank with spacers attached to orbiter both fore and aft. Both SRB's are present but not attached.
(O ₃)/(T ₉)/(S _{3/2})/(S _{3/2}) Y20	Same as above with spacer only on forward attach point.
(O ₃)/(T ₉)/(S _{3/2})/(S _{3/2}) Y30	Same as above with spacer only on aft attach point.
(O ₃)/(T ₁₁)/(S _{3/2})/(S _{3/2})	T ₁₁ external tank with SRB's present but not attached.
(O ₃)/(T ₁₂)/(S _{3/2})/(S _{3/2})	T ₁₂ external tank with SRB's present but not attached.
(O ₃)/(T ₇)/(S _{3/2})/(S _{3/2})	T ₇ external tank with SRB's present but not attached.
(O ₃)/(T ₁₃)/(S _{3/2})/(S _{3/2})	T ₁₃ external tank with SRB's present but not attached.
(O ₃)/(T ₉)/(S _{3/2})/(S _{3/2}) G	T ₉ external tank with SRB's present but not attached. Grit is applied to each model.

EXTERNAL TANK BALANCEConfigurationET in Presence of:

(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2})	Orbiter and both SRB's.
(T ₉)(U ₅)/(O ₃)/(S _{3/2})/(S _{3/2})	The attach hardware, the orbiter and both SRB's.
(T ₉)(U ₅)(S _{3/2})/(O ₃)/(S _{3/2})	The orbiter and one SRB with the attach hardware and the right-side SRB attached to the tank.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y1E	The orbiter and both SRB's with fore and aft spacers attached to the tank.

ConfigurationET in Presence of:

(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y1E G	Same as above with grit applied to models.
(T ₉)(U ₅)/(O ₃)/(S _{3/2})/(S _{3/2}) Y1E	The orbiter and both SRB's with fore and aft spacers and the attach hardware attached to the tank.
(T ₉)(U ₅)/(O ₃)/(S _{3/2})/(S _{3/2}) Y2E	Same as above with spacer only on tank forward attach point.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y3E	The orbiter and both SRB's with spacer attached to tank at aft attach point.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y2E	The orbiter and both SRB's with spacer attached on tank forward attach point.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y10	The orbiter with fore and aft spacers and both SRB's.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y20	The orbiter with forward spacer and both SRB's.
(T ₉)(U ₅)/(O ₃)/(S _{3/2})/(S _{3/2}) Y20	The same as above with attach hardware attached to the tank.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) Y30	The orbiter with aft spacer and both SRB's.
(T ₉)(S _{3/2})/(O ₃)/(S _{3/2})	The orbiter and both SRB's with right-side SRB attached to tank.
(T ₉)/(O ₃)/(S _{3/2})/(S _{3/2}) G	The orbiter and both SRB's with grit applied to all models.

SRB BALANCEConfigurationSRB in Presence of:

(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2})	Orbiter, external tank and right-side SRB. All are on separate stings.
(S _{3/2})/(O ₃)/(T ₉)(U ₅)/(S _{3/2})	Same as above with attach hardware attached to ET.
(S _{3/2})/(O ₃)/(T ₉)(U ₅)(S _{3/2})	Same as above with attach hardware and right side SRB attached to ET.

Configuration

SRB in Presence of:

(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y1E	Orbiter, external tank and right-side SRB with fore and aft spacers on ET.
(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y1E G	Same as above with grit applied to all models.
(S _{3/2})/(O ₃)/(T ₉)(U ₅)/(S _{3/2}) Y1E	Orbiter, external tank and right-side SRB with fore and aft spacers and attach hardware on ET.
(S _{3/2})/(O ₃)/(T ₉)(U ₅)/(S _{3/2}) Y2E	Same as above with front spacer only on ET.
(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y2E	Same as above without attach hardware on ET.
(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y10	Orbiter with fore and aft spacers attached, external tank and right-side SRB.
(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y20	Same as above with only forward spacer on orbiter.
(S _{3/2})/(O ₃)/(T ₉)/(S _{3/2}) Y30	Same as above with only aft spacer attached to orbiter.
(S _{3/2})/(O ₃)/(T ₉)(U ₅)/(S _{3/2}) Y20	Orbiter with forward spacer, external tank with attach hardware and right-side SRB.
(S _{3/2})/(O ₃)/(T ₉)(S _{3/2})	Orbiter and external tank with right-side SRB attached to tank.
(S _{3/2})/(O ₃)(T ₉)/(S _{3/2})	Orbiter and external tank attached on upper sting. Right-side SRB also present.

MODEL AND SUPPORT HARDWARE

The general arrangement of the .004 scale wind tunnel model of the Space Shuttle launch vehicle is shown in Figure 5. The model consists of an orbiter (O3), an external tank (ET), designated T9 and two solid rocket boosters (SRB's), designated S3.

The orbiter model is a 0074 baseline orbiter (reference drawings are given in Table 3). Model length is approximately 5.3 inches with a wing span of 3.747 inches. A schematic of the orbiter is shown in Figure 6.

Five different ET configurations were tested. The difference in these configurations is the nose shape. The ET model is equipped with detachable Orbiter-External Tank attach hardware. Runs were made with and without the attachment hardware. Actual model length of the ET is 7.304 inches and diameter is 1.296 inches. The ET model is shown in Figure 7 and the five nose shapes in Figure 9.

A schematic of the SRB model is presented in Figure 8. Model length is 7.032 inches and model diameter is .568 inches. The model includes the SRB-Orbiter attach ring and the separation rockets. No other protuberances were modeled.

Both the orbiter and external tank were instrumented with six-component internal strain gage balances (numbers 231 and 232). The left SRB was instrumented with a new 4-component (normal and side force, pitch and yawing moments) internal strain gage balance (number 240). The balance and sting for this SRB were fabricated as one piece. The right SRB was not instrumented and was a permanent part of the sting. The two SRB

models were held to the lower sting by an existing dual sting adapter (Figure 10) which also held the models away from the ET surface laterally.

Base pressures on the orbiter, ET, and left-side SRB were measured. The effect of base pressures on the orbiter axial force were eliminated before moments were transferred. Actual moment transfer equations are shown in the Data Reduction section. The location of base pressure tubes on the models are shown in Figure 11. Where more than one measurement was made, the pressures were averaged and applied over the entire base of the model.

The MSFC dual sting staging system (Figure 12 and Reference 4) was the support hardware used in the test. This system allows two models to be moved with three degrees of freedom. The upper model can be moved vertically and pitched relative to the lower model. The lower model can be moved horizontally. For this test the horizontal position was fixed in the nominal launch position (alignment of the two aft attach points). The vertical separation of the two models (z) was measured between the aft attach points on the two models as shown in Figure 13. The angle of incidence between the two models (i_0) is the angle between their centerlines. This angle is positive in the direction of positive angle of attack.

Several runs were made with "grit" on all three models. Number 80 grit was placed on the orbiter wing and tail. Number 180 grit was placed on the nose of each model. Grit locations are shown in Figure 14 for the orbiter and Figure 15 for the ET and SRB.

A model-to-model fouling problem had been encountered on previous tests of this type. Fouling was monitored on this test by placing a fouling strip on the models at the point of most probable contact and using a previously designed fouling circuit. Fouling between the ET and SRB was detected on runs 310, 311, 312, 313, 314, 327, 328, 329, 330, 331. This fouling is obvious when plots containing these runs are viewed.

TEST FACILITY DESCRIPTION

The NASA/MSFC 14 x 14-inch Trisonic Wind Tunnel is an intermittent blowdown type that exhausts into a vacuum system or the atmosphere. The important operational characteristics of this facility are discussed below.

The Trisonic Wind Tunnel is capable of covering the Mach number range of 0.2 to 5.0 by utilizing a transonic section for the 0.2 to 1.96 range and a supersonic section for the 2.74 to 4.96 range. Mach number variations between 0.2 and 0.8 are obtained by using a controllable diffuser. Mach numbers between 0.90 and 1.3 are achieved by the use of plenum suction and the perforated walls in the test section. Mach numbers of 1.46 and 1.96 are obtained by utilizing fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzles are tilted and translated automatically to produce Mach numbers in .25 increments.

The required recharge time for the tunnel is nominally 5-10 minutes with the transonic test section and 15-20 minutes for the supersonic section. Changeover from the transonic section to the supersonic section requires approximately 40 minutes.

Actual run times are dependent upon actual tunnel conditions, i.e., Mach number and stagnation pressure. Nominal run times are approximately 1.5 to 2.0 minutes in the transonic section and 45 to 50 seconds in the supersonic section.

The data acquisition system is a solid state analog-to-digital converter which has 12 data channels, 10 of which are available to the customer. Raw data is recorded on punched cards for transfer to a computer which reduces the data to coefficient form.

TEST PROCEDURE

Due to sting deflections, data interpolation was necessary to obtain data at the nominal separation distance (.14 inches) and incidence angle (.5°). This required data for two different separation distances and three orbiter-to-tank incidence angles. The z distances chosen were .14 and .28 inches, measured at the aft attach point and incidence angles (i_0) of -.5, .5 and 1.5 degrees. The i_0 angle is measured relative to the tank centerline. For beta sweeps at $\alpha = 0$ degrees, only the nominal position was tested. For beta sweeps at $\alpha = \pm 5^\circ$, all six points were tested.

Runs were made to determine the effects of the Orbiter-External Tank attach hardware after modeling the attach hardware as closely as possible. All six i_0 and z positions were tested to allow interpolation of the data. Runs were also made to determine the effects of Orbiter-External Tank model support hardware (spacers). This was the same type of hardware used to connect models on the launch vehicle tests TWT 566 and TWT 567. Table 4 shows pertinent spacer dimensions and Figure 16 shows typical spacer drawings.

Test 567 required a larger sting in the ET than did the present test. The effects of the larger sting diameter on the SRB was investigated by making runs with an enlarged sting (T_{10}). Runs were also made with no sting in the ET to enable predictions of total sting effects on SRB data.

The right-side SRB was tested both metric (attached to the ET) and non-metric (sting mounted) to enable an estimate of SRB forebody drag.

③ This method was required because there was no axial force gage in the SRB balance. The nose shape study was also made metric and non-metric.

DATA REDUCTION

The parameters recorded and characteristics calculated were:

1. Freestream total pressure, P_t
2. Freestream static pressure, P_∞
3. Dynamic pressure, q_∞
4. Mach number, M_∞
5. Freestream Reynold's number per unit length, RN/ℓ_{REF}
6. Nominal angle of attack of ET, α
7. Vertical sting deflection, ΔZ , + in direction of + normal force
8. Angular sting deflection, $\Delta\alpha$, + in direction of + α
9. Normal force coefficient, C_{N_m}
10. Pitching moment coefficient, C_{m_m}
11. Total axial force coefficient, CA_{T_m} (orbiter and ET only)
12. Base axial force coefficient, CA_{b_m}
13. Side force coefficient, C_{y_m}
14. Yawing moment coefficient, C_{n_m}
15. Rolling moment coefficient, C_{ℓ_m} (orbiter and ET only)

Reference quantities used to reduce the data are presented in Table 5. Figure 17 shows the sign conventions on the forces and moments in the missile axis system. Orbiter, ET, and SRB data were output as functions of ET angle of attack. Base pressure probe locations are shown in Figure 11. On the ET and orbiter, the base pressures were averaged and applied to the total base area.

All model force and moments are resolved in the missile axis system. The following relationships were used to non-dimensionalize force and moment measurements:

$$C_{N_m} = \frac{F_N}{q S_{REF}}, \text{ normal force coefficient}$$

$$C_{A_m} = \frac{F_A}{q S_{REF}}, \text{ total axial force coefficient}$$

$$C_{Y_m} = \frac{F_Y}{q S_{REF}}, \text{ side force coefficient}$$

$$C_{m_m} = \frac{M_y}{q S_{REF} l_{REF}}, \text{ pitching moment coefficient}$$

$$C_{n_m} = \frac{M_z}{q S_{REF} l_{REF}}, \text{ yawing moment coefficient}$$

$$C_{l_m} = \frac{M_x}{q S_{REF} l_{REF}}, \text{ rolling moment coefficient}$$

$$C_{A_{b_m}} = \frac{-C_{p_b}}{S_{REF}} A, \text{ base axial force coefficient}$$

$$C_{p_b} = \frac{(P)_{AVE} - P_\infty}{q}, \text{ base pressure coefficient}$$

$$C_{A_{F_m}} = C_{A_m} - C_{A_{b_m}}, \text{ forebody axial force coefficient}$$

For the orbiter and ET, moment coefficients shown in this report are referenced to the position of the orbiter nose on the ET centerline. For the SRB's, the absence of axial force measurements restricted its moment reference point to the projection of the orbiter nose on the SRB centerline. Reference dimensions and the location of each BMC from the nose of the individual models are shown in Table 5.

For the orbiter, moments were transferred from the balance moment center (BMC) to the orbiter nose and the ET centerline. Axial and normal force were rotated through i_0 to facilitate the summation of total body data. Base pressure was subtracted from the pitching moment equation. Orbiter C_{N_m} and C_{A_m} were corrected for base pressure in the following manner:

$$C_{A_{Fm}} = C_{A_m} - C_{A_{b_m}} \cos \delta_{AVE}$$

$$C_{N_m} = C_{N_m} - C_{A_{b_m}} \sin \delta_{AVE}$$

where δ_{AVE} is the average inclination of the orbiter base (see Figure 18).

The moments were then transferred to the moment reference center.

$$\begin{aligned} C_{m_m})_{MRP} = & C_{m_m})_{BMC} - C_{N_m} \left[\frac{\Delta X_1}{l_{REF}} \right] - C_{A_b} \left[\frac{\Delta Z_2}{l_{REF}} \right] \cos \delta_{AVE} \\ & + C_{A_{b_m}} \sin \delta_{AVE} \left[\frac{\Delta X_7}{l_{REF}} \right] + (C_{A_{Fm}} \cos i_0 + C_{N_m} \sin i_0) \\ & \times \frac{\Delta Z_3}{l_{REF}} \end{aligned}$$

$$C_{n_m})_{MRP} = C_{n_m})_{BMC} - C_{Y_m} \left[\frac{\Delta X_1}{l_{REF}} \right]$$

$$C_{l_m})_{MRP} = C_{l_m})_{BMC} - C_{Y_m} \left[\frac{\Delta Z_4}{l_{REF}} \right]$$

From Figure 18:

$$\Delta X_1 = 3.7 \text{ inches}$$

$$\Delta X_7 = 1.53 \text{ (area centroid)}$$

$$\Delta Z_2 = .058 \text{ (area centroid)}$$

$$\Delta Z_3 = 1.192 + 2 + 4.428 \sin i_0$$

$$\Delta Z_4 = 1.192 + 2 + .728 \sin i_0$$

$$\delta_{AVE} = 12^\circ$$

The parameters z and i_0 depend on the run made. The previous values of C_N and C_A are then rotated through i_0 .

$$C_{N_m} = C_{N_m})_{pre} \cos i_0 - C_{A_m})_{pre} \sin i_0$$

$$C_{A_m} = C_{A_m})_{pre} \cos i_0 + C_{N_m})_{pre} \sin i_0$$

For the external tank, moments were transferred to the projection of the orbiter nose on the tank centerline. The equations are:

$$C_{m_m} = C_{m_m})_{BMC} - C_{N_m} \left[\frac{\Delta X_5}{l_{REF}} \right]$$

$$C_{n_m} = C_{n_m})_{BMC} - C_{Y_m} \left[\frac{\Delta X_6}{\ell_{REF}} \right]$$

$$C_{\ell_m} = C_{\ell_m}$$

where $\Delta X_6 = 2.901$

REFERENCES

1. Cole, Paul, "Double Interpolation Program For Use With the MSFC Staging Mechanism", Northrop Memorandum, M-9241-72-67, May 1972.
2. Rampy, J. M. and T. C. Davis, "Effects of Model Variables on SSLV and Component Aerodynamics", Northrop Memorandum, M-9230-73-220, Sept. 1973.
3. Dill, Charlie C., "Preliminary Aerodynamic Loads Breakdown in Pitch for Shuttle Launch Configuration 2A", S&E-SERO-AA-73-62, Sept. 1973.
4. Cole, Paul, "MSFC 14" TWT Dual Sting Support Mechanism Users Information", Northrop Memorandum, M-9241-72-69, May 1972.

DATE: 4/13/73 - 4/30/73
6/25/73 - 6/28/73

TABLE Ia.

TEST CONDITIONS
TEST TWT 570

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	$4.95 \times 10^6/\text{ft.}$	4.35	100
0.80	6.00	6.45	100
0.90	6.25	7.36	100
1.05	6.45	8.47	100
1.25	6.48	11.48	100
1.46	6.50	9.47	100
1.96	6.92	10.20	100
2.99	9.00	10.58	140
3.50	6.96	6.36	140
4.00	7.50	6.64	140
4.96	4.90	3.07	140

BALANCE UTILIZED: MSFC 231

CAPACITY:

NF 122 lbs
SF 52 lbs
AF 22 lbs
PM 122 in.-lbs
YM 53 in.-lbs
RM 30 in.-lbs

ACCURACY:

± .61
± .26
± .10
± .61
± .27
± .15

COEFFICIENT
TOLERANCE:

± .0082
± .0035
± .0013
± .0015
± .0007
± .0004

COMMENTS:

DATE: 4/13/73 - 4/30/73
6/25/73 - 6/28/73

TABLE 1b.
TEST CONDITIONS
TEST TWI 570

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	$4.95 \times 10^6/\text{ft}$	4.35	100
0.80	6.0	6.45	100
0.90	6.25	7.36	100
1.05	6.45	8.47	100
1.25	6.48	11.48	100
1.46	6.5	9.47	100
1.96	6.92	10.20	100
2.99	9.0	10.58	140
3.50	6.96	6.36	140
4.00	7.5	6.64	140
4.96	4.9	3.07	140

BALANCE UTILIZED: MSFC 232A

CAPACITY:

NF 300 lbs
SF 143 lbs
AF 50 lbs
PM 400 in.-lbs
YM 192 in.-lbs
RM 100 in.-lbs

ACCURACY:

± 1.5
 $\pm .72$
 $\pm .25$
 ± 2.00
 $\pm .96$
 $\pm .50$

COEFFICIENT
TOLERANCE:

$\pm .02$
 $\pm .01$
 $\pm .003$
 $\pm .013$
 $\pm .003$
 $\pm .001$

COMMENTS:

DATE: 4/10/73 - 4/30/73
6/25/73 - 6/28/73

TABLE 1c.
TEST CONDITIONS
TEST TWT 570

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	$4.95 \times 10^6/\text{ft}$	4.35	100
0.80	6.0	6.45	100
0.90	6.25	7.36	100
1.05	6.45	8.47	100
1.25	6.48	11.48	100
1.46	6.5	9.47	100
1.96	6.92	10.20	100
2.99	9.0	10.58	140
3.50	6.96	6.36	140
4.00	7.5	6.64	140
4.96	4.9	3.07	140

BALANCE UTILIZED: MSFC 240

CAPACITY:

NF 20 lbs
SF 20 lbs
AF 40 in.-lbs
PM 40 in.-lbs
YM 40 in.-lbs
RM

ACCURACY:

COEFFICIENT
TOLERANCE:

COMMENTS:

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DATE: 4/13/73 - 4/11/73
6/25/73 - 6/28/73

TABLE II.
TEST TWT 570 DATA SET/RUN NUMBER COLLATION SUMMARY

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETER VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
			1	2	3	4		0.6	0.8	0.9	1.05	1.25	1.46	1.76	2.99	3.2	4.0	4.36
R00001	(03)/(194)/(53)	4	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00002		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00003		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00004		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00005		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00006		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00007		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00008		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00009		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00010		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00011		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00012		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00013		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00014		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00015		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00016		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00017		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00018		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00019		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00020		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00021		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00022		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00023		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00024		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00025		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00026		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00027		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00028		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00029		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00030		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00031		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00032		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00033		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00034		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00035		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00036		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00037		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00038		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00039		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00040		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00041		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00042		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00043		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00044		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00045		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00046		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00047		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00048		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00049		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00050		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00051		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00052		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00053		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00054		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00055		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00056		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00057		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00058		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00059		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00060		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00061		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00062		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00063		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00064		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00065		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00066		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00067		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00068		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00069		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00070		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00071		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00072		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00073		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00074		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00075		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00076		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00077		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00078		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00079		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00080		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00081		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00082		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00083		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00084		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00085		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00086		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00087		1	0	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11
R00088		1	0	0	0	0	0	1										

TABLE II. (CONTINUED)
TEST TMT 570 DATA SET/RUN NUMBER COLLATION SUMMARY

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETER VALUES			NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	b	ζ_0	ζ_1	ζ_2		.6	.8	.9	1.05	1.25	1.46	1.96	2.99	3.50	4.0	4.96
R83 020	(0 ₃)/(10 ₁)(0 ₅)/(0 ₂)	A	0	-5°	14	970	0/0	6	165	164	163	162	191	155				
021				5°					173				141	156				
022				15°				6	181	180	179	178	192	157				
023				-5°	28			6	166	167	168	164	193	158				
024				5°				6	174	175	176	177	194	159				
025		Y	Y	15°				6	182	183	184	85	195	160				
026		C	5	5°	14			6	189	188	187	80	196	161				
036	(0 ₂)/(10 ₁)(0 ₅)/(0 ₃)	A	0					6	177	198	194	100	201	202				
034	(0 ₃)/(10 ₁)(0 ₅)/(0 ₂)	A	0					6	149	150	151	141	145	153				
035		C	5					6	148	147	146	145	145	154				
079	(0 ₂)/(0 ₃)/(0 ₅)/(0 ₄)							2		202								
07								9	207	210	245		218	252				
07								9	212	277								
07								9	247		252							
07								9	272									
07								9	282	30								
07								9	312	30								
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07								9	312	30								

TABLE II. (CONTINUED)
TEST TWT 570 DATA SET/RUN NUMBER COLLATION SUMMARY

37

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		A	B	ζ_0	Z	ϕ_0/χ_0	δ/χ_0		.6	.8	.9	1.05	1.25	1.46	1.96	2.99	3.50	4.0	4.96
R83 079	$(O_3)/(I_{11})/(S_3)$	A	O	.5°	.14"	90%	0/0	3	X	X	238	X	239	X	X	X	X	252	X
080		O	O					7	236	237	X	240	X	247	248	251	X	X	255
081	$(O_3)/(I_{12})/(S_3)$	A	O					3	X	X	243	X	242	X	X	X	X	253	X
082		O	O					7	245	244	X	241	X	246	249	250	X	X	254
063	$(O_3)/(I_{10})/(S_3)$	A	O					3	X	X	305	306	304	X	X	X	X	X	X
064		O	B					3	X	X	309	307	308	X	X	X	X	X	X
083	$(O_3)/(I_7)/(S_3)$	O	O					9	338	339	340	342	341	349	350	354	X	X	355
084	$(O_3)/(I_{13})/(S_3)$	O	O					9	373	374	375	376	377	366	365	356	X	X	357
									X	X	X	X	X	X	X	X	X	X	X
065	$(S_{3/2})/(I_9)(O_3)/(S_{3/2})$	A	O					6	233	X	232	231	230	X	234	X	235	X	X
066		O	B					10	312	311	310	314	313	327	328	329	330	X	331
067		A	O					6	X	322	X	321	323	324	X	333	X	X	332
068		S	B					6	X	X	316	315	317	326	X	337	336	X	X
069		-5	B					6	X	X	319	320	318	325	X	334	335	X	X
									dy	gy						# SPIN VORI	AVT		
070	$(O_3)/(I_9)/(S_3)$ Y1E	A	O					3	.2	.05	267	268	266	X	X	X	9	10	X
071		O	B					3			271	269	270	X	X	X	9	10	X
072	$(O_3)/(I_9)/(S_3)$ Y10	A	O					3			258	260	259	X	X	X	21	22	X
073		O	B					3			262	261	263	X	X	X	21	22	X

7 13 19 25 31 37 43 49 55 61 67 7576
C.N. ICLM CV CYN ICLB CFE CAB RCH ALPHA 07
IDPVAR (1) IDPVAR (2) NDV

COEFFICIENTS:
a or b
SCHEDULES
(A) $\alpha = -10^\circ, -8^\circ, -6^\circ, -4^\circ, -2^\circ, 0^\circ, 2^\circ, 4^\circ, 6^\circ, 8^\circ, 10^\circ$
(B) $\beta = -10^\circ, -8^\circ, -6^\circ, -4^\circ, -2^\circ, 0^\circ, 2^\circ, 4^\circ, 6^\circ, 8^\circ, 10^\circ$

☐ PRETEST ☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				# SPACERS FORE AFT		
		α	β	β_2	β_3	δ_2/δ_3	δ_2/δ_3		dy	gy	1.25				
R03040	$(O_2)/(T_2)/(S_2) Y_{1E}$	A	0	$.5^\circ$	$.14''$	90%	0%	1	$.1''$	$.05''$	217/1	X	X	7	8
041								1	$.2$		211/1	X	X	9	10
042								1	$.3$		218/1	X	X	11	12
043				∇				1	$.2$	$.10''$	219	X	X	13	14
044				1.5°				1		$.05''$	212	X	X	19	10
045				$-.5^\circ$	∇			1			213/1	X	X	20	10
046				$-.5^\circ$	$.28''$			1			214	X	X	18	16
047				1.5°				1			215	X	X	17	16
048		∇	∇	$.5^\circ$	∇			1			216	X	X	15	16
049	∇	0	B	$.5^\circ$	$.14''$			1			210	X	X	9	10
052	$(O_2)/(T_2)/(S_2) Y_{1O}$	A	0					1			207/1	X	X	21	22
055	$(O_2)/(T_2)/(S_2) Y_{1E} U_5$							1			203	X	X	9	10
074	$(O_2)/(T_2)/(S_2) Y_{2E}$							1			265	X	X	9	X
056	$(O_2)/(T_2)/(S_2) Y_{2E} U_5$							1			204	X	X	9	X
057	$(O_2)/(T_2)/(S_2) Y_{2O} U_5$							1			205/1	X	X	21	X
	$(O_2)/(T_2)/(S_2) Y_{2O}$							1			264	X	X	21	X
050	$(O_2)/(T_2)/(S_2) Y_{1E} G$							1			220	X	X	9	10
051	$(O_2)/(T_2)/(S_2) Y_{3E}$							1			209	X	X	X	10
054	$(O_2)/(T_2)/(S_2) Y_{2O}$							1			208	X	X	X	22
∇ 053	$(O_2)/(T_2)/(S_2) Y_{2O}$	∇	∇	∇	∇			1			206	X	X	21	X

[illegible]

TABLE III.
MODEL DIMENSIONAL DATA

MODEL COMPONENT: Body B10

GENERAL DESCRIPTION: Double Delta Wing Fuselage Per Lines VL70-000093,
with 57.0 in Radius Nose.

2A Configuration Lt. Wt. Orbiter

Scale Model = .004

DRAWING NUMBER: V172-000061
VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length, in.	<u>1328.3</u>	<u>5.313</u>
Max. Width $X_{0.560}$ to $X_{0.1307}$	<u>216.0</u>	<u>0.864</u>
Max. Depth	<u>239.0</u>	<u>0.956</u>
Fineness Ratio	<u>5.495</u>	<u>5.495</u>
Area, FT^2		
Max. Cross-Sectional	<u>319.556</u>	<u>0.005</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III. (Continued)

MODEL COMPONENT: Canopy - C5

GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000092.

Scale Model = .004

DRAWING NUMBER: VL70-000092

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Sta. Fwd Bulkhead	<u>391.00</u>	<u>1.564</u>
Sta. T.E.	<u>560.0</u>	<u>2.240</u>
Canopy Intersects Body ML	<u>391.00</u>	<u>1.564</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III. (Continued)

MODEL COMPONENT: Manipulator Housing D-7

GENERAL DESCRIPTION: 2A Configuration, Light WT. Orbiter Per Lines

VL70-000093

Scale Model = .004

DRAWING NUMBER: VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length, in.	<u>881.00</u>	<u>3.524</u>
Max. Width, in.	<u>51.00</u>	<u>0.204</u>
Max. Depth, in.	<u>20.00</u>	<u>0.080</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

ε Fuselage, BP = 0.0
 WP = 500.0 INFS
 X₀ 426.0 to 1307.0

TABLE III. (Continued)

MODEL COMPONENT: F4 Body FlapGENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000094 "A"Scale Model = .004DRAWING NUMBER: VL70-000094ADIMENSIONS:FULL-SCALEMODEL SCALE

Length, in.

84.700.3388

Max. Width, in.

265.001.060

Max. Depth

Fineness Ratio

Area

Max. Cross-Sectional

Planform, ft²142.637150.002282

Wetted

Base

TABLE III. (Continued)

MODEL COMPONENT: OMS PODS-M3

GENERAL DESCRIPTION: 2A Light WT Configuration; per MC120074,
Per NR Lines VL70-000094.

Scale Model = .004

DRAWING NUMBER: VL70-000094

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length, in.	<u>346.0</u>	<u>1.384</u>
Max. Width, in.	<u>108.0</u>	<u>0.432</u>
Max. Depth, in.	<u>72.8</u>	<u>0.291</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

g of OMS POD

WP = 463.9 inches FS; WP 400.0 + 63.9 = 463.90 INFS
1.600 + .2556 = 1.8556 INMS

BP = 80.0 in. FS; 0.320 INMS

From Fuselage Station 1214.0 to 1560 INFS = 346.0 INFS
4.856 to 6.240 = 1.384 INMS

TABLE III. (Continued)

MODEL COMPONENT: Wing W-87 New Light WeightGENERAL DESCRIPTION: Orbiter Configuration per lines VL70-000093

Scale Model = .004

DRAWING NUMBER:

VL70-000093DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea, FT² (W.R.P.)

Planform

2689.38

0.043

Wetted

--

--

Span (equivalent), FT

77.12

0.308

Aspect Ratio

2.214

2.214

Rate of Taper

1.176

1.176

Taper Ratio

0.209

0.209

Dihedral Angle, degrees @ 75.33% element line

3.860

3.860

Incidence Angle, degrees @ .425% to 1.00%

3.000

3.000

Aerodynamic Twist, degrees

--

--

Toe-In Angle

--

--

Cant Angle

--

--

Sweep Back Angles, degrees

--

--

Leading Edge

44.873

44.873

Trailing Edge

-10.242

-10.242

0.25 Element Line

35.050

35.050

Chords:

Root (Wing Sta. 0.0)

690.19

2.761

Tip, (equivalent)

144.30

0.577

MAC

476.76

1.907

Fus. Sta. of .25 MAC

1136.12

4.544

W.P. of .25 MAC

289.44

1.158

B.L. of .25 MAC

181.03

0.724

Airfoil Section

Root

Tip

EXPOSED DATAArea, FT²

1746.87

6.987

Span, (equivalent), FT

59.16

0.237

Aspect Ratio

2.004

2.004

Taper Ratio

0.256

0.256

Chords

Root

562.77

2.251

Tip

144.30

0.577

MAC

394.81

1.579

Fus. Sta. of .25 MAC

1185.17

4.741

W.P. of .25 MAC

291.56

1.166

B.L. of .25 MAC

250.54

1.002

LEADING EDGE CUFF (data for (1) side)Plan form area, FT² (BP 108.0)

120.333

0.0019

L.E. Intersect Fus ML @ STA

560.0

2.240

L.E. Intersects Wing @ STA

1035.0

4.140

TABLE III. (Continued)

MODEL COMPONENT: Elevon E-18GENERAL DESCRIPTION: 2A Configuration Per W-87, NR Lines VL70-000093Data for (1) of (2) SidesModel Scale = .004DRAWING NUMBER:VL70-000093DIMENSIONS:FULL-SCALEMODEL SCALEArea, FT^2 205.5170.0033

Span (equivalent), in.

353.341.413

Inb'd equivalent chord

114.780.459

Outb'd equivalent chord

55.000.220Ratio movable surface chord/
total surface chord

At Inb'd equiv. chord

.208.208

At Outb'd equiv. chord

.400.400

Sweep Back Angles, degrees

Leading Edge

0.000.00

Tailing Edge

-10.02-10.02

Hingeline

0.000.00Area Moment (Normal to hinge line), FT^3
Product of area moment1548.070.00010

TABLE III. (Continued)

MODEL COMPONENT: Vertical Tail V5 (Light Wt. Orbiter Config)GENERAL DESCRIPTION: Center Line Vertical Tail on the Double Delta Configuration with Double Wedge Airfoil and Rounded Leading Edge, TotalData Includes Void Area Listed Below Scale Model = .004DRAWING NUMBER: VL70-000095DIMENSIONS: FULL-SCALE MODEL SCALETOTAL DATA

Area, FT ²	386.05	0.006
* Void (included above), FT ²	13.17	0.0002
Blanketed included above, FT ²	12.67	0.0002
Span (equivalent), FT	24.37	0.097
Aspect Ratio	1.590	1.590
Rate of Taper	0.507	0.507
Taper Ratio	0.426	0.426
Dihedral Angle, degrees	--	--
Incidence Angle, degrees	--	--
Aerodynamic Twist, degrees	--	--
Toe-In Angle	0.0	0.0
Cant Angle	0.0	0.0
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Wing Sta. 0.0)	257.99	1.032
Tip, (equivalent)	109.78	0.439
MAC	193.84	0.775
Fus. Sta. of .25 MAC	1473.64	5.895
W.P. of .25 MAC	647.31	2.589
B.L. of .25 MAC	0.0	0.0
Airfoil Section		
Root		
Tip		

EXPOSED DATA

Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

*Void area noted is the area located at lower aft portion of tail surface.

TABLE III. (Continued)

MODEL COMPONENT: Rudder R5GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000095.Scale Model - .004DRAWING NUMBER: VL70-000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area , FT^2	<u>98.67</u>	<u>0.0016</u>
Span (equivalent), in.	<u>201.0</u>	<u>0.804</u>
Inb'd equivalent chord	<u>91.585</u>	<u>0.366</u>
Outb'd equivalent chord	<u>50.833</u>	<u>0.203</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.83314</u>	<u>34.83314</u>
Tailing Edge	<u>26.24915</u>	<u>26.24915</u>
Hingeline	<u>34.83314</u>	<u>34.83314</u>
Area Moment (Normal to hinge line), FT^3	<u>526.125</u>	<u>0.00003</u>
Product of area and mean chord		

TABLE III. (Continued)

MODEL COMPONENT: U5 Interstage Structure

GENERAL DESCRIPTION: The aft tie-downs that support the SRBs and the orbiter
on the external tank.

Scale Model = 0.004

DRAWING NUMBER: V172-000061

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	_____	_____	_____
Max. Width	_____	_____	_____
Max. Depth	_____	_____	_____
Fineness Ratio	_____	_____	_____
Area			
Max. Cross-Sectional	_____	_____	_____
Planform	_____	_____	_____
Wetted	_____	_____	_____
Base	_____	_____	_____

TABLE III. (Continued)

MODEL COMPONENT: S3 Booster Solid Rocket MotorGENERAL DESCRIPTION: Configuration Per NR Lines VL77-000012 and
VL72-000061BBody of Revolution, Data for (1) of (2) SidesScale Model = .004DRAWING NUMBER: VL77-000012

Data for (1) of (2) Sides

DIMENSIONS:

	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1758.00</u>	<u>7.032</u>	<u> </u>
Max. Width	<u>142.00</u>	<u>0.568</u>	<u> </u>
Max. Depth	<u>259.00</u>	<u>1.036</u>	<u> </u>
Finessess Ratio	<u>6.788</u>	<u>6.788</u>	<u> </u>
Area			
Max. Cross-Sectional	<u>109.978</u>	<u>0.00176</u>	<u> </u>
Planform	<u> </u>	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>	<u> </u>
Base	<u>365.870</u>	<u>0.00585</u>	<u> </u>

REF

FS (Orbiter) 0.00 = 751.0 in. ET = 202.0 BSRM

WP (BSRM) = 400 - 344.413 = 55.587 INFS

BP (Orbiter) 0.00 = 243.0 BSRM

TABLE III. (Continued)

MODEL COMPONENT: External Tank T9

GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL78-000018 and VL72-000061B;
Body of Revolution

Scale Model = .004

DRAWING NUMBER: VL78-000018

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1826.00</u>	<u>7.304</u>	<u> </u>
Max. Width	<u>324.00</u>	<u>1.296</u>	<u> </u>
Max. Depth	<u> </u>	<u> </u>	<u> </u>
Fineness Ratio	<u>6.13889</u>	<u>6.13889</u>	<u> </u>
Area			
Max. Cross-Sectional	<u>572.555</u>	<u>0.00916</u>	<u> </u>
Planform	<u> </u>	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>	<u> </u>
Base	<u>572.555</u>	<u>0.00916</u>	<u> </u>

REF

FS (Orbiter) 0.00 = TANK Station 635.0 INFS

WP (ET) = 400 - 344.413 = 55.587 INFS

BP (Orbiter) 0.00 = 0.00 ET

TABLE III. (Continued)

MODEL COMPONENT: External Tank T7GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL78-000018 and VL72-000061B;
Body of RevolutionScale Model = .004DRAWING NUMBER: VL78-000018

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1989.00</u>	<u>7.956</u>	<u> </u>
Max. Width	<u>324.00</u>	<u>1.296</u>	<u> </u>
Max. Depth	<u> </u>	<u> </u>	<u> </u>
Fineness Ratio	<u>6.13889</u>	<u>6.13889</u>	<u> </u>
Area			
Max. Cross-Sectional	<u>572.555</u>	<u>0.00916</u>	<u> </u>
Planform	<u> </u>	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>	<u> </u>
Base	<u>572.555</u>	<u>0.00916</u>	<u> </u>

REF

FS (Orbiter) 0.00 = TANK Station 751.0 INFS

WP (ET) = 400 - 344.413 = 55.587 INFS

BP (Orbiter) 0.00 = 0.00 ET

TABLE III. (Continued)

MODEL COMPONENT: BODY - External Tank T₁₂

GENERAL DESCRIPTION: Body of revolution with triconic nose

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1871.0</u>	<u>7.416</u>	_____
Max. Width	<u>324.0</u>	<u>1.296</u>	_____
Max. Depth	_____	_____	_____
Fineness Ratio	<u>5.774</u>	_____	_____
Area			
Max. Cross-Sectional	<u>572.555</u>	<u>0.00916</u>	_____
Planform	_____	_____	_____
Wetted	_____	_____	_____
Base	_____	_____	_____

TABLE III. (Concluded)

MODEL COMPONENT: BODY - External Tank T₁₃GENERAL DESCRIPTION: Body of revolution with quadraconic noseDRAWING NUMBER: 80M32610

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1871.0</u>	<u>7.484</u>	<u> </u>
Max. Width	<u>324.0</u>	<u>1.296</u>	<u> </u>
Max. Depth	<u> </u>	<u> </u>	<u> </u>
Fineness Ratio	<u>5.774</u>	<u> </u>	<u> </u>
Area			
Max. Cross-Sectional	<u>572.555</u>	<u>0.00916</u>	<u> </u>
Planform	<u> </u>	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>	<u> </u>

TABLE IV. SPACER DESIGNATION

ITEM	SPACER NO.	TYPE	POSITION	i_o	Z	GAP	"D"	"A"	"B"
1	7	2	Front	+0.5	.136	.05	.100	.204	.200
2	8	2	Rear	+0.5	.136	.05	.100	.082	.200
3	9	1	Front	+0.5	.136	.05	.200	.204	.200
4	10	1	Rear	+0.5	.136	.05	.200	.082	.200
5	11	1	Front	+0.5	.136	.05	.300	.204	.200
6	12	1	Rear	+0.5	.136	.05	.300	.082	.200
7	13	1	Front	+0.5	.136	.10	.200	.154	.200
8	14	1	Rear	+0.5	.136	.10	.200	.032	.200
9	15	1	Front	+0.5	.272	.05	.200	.458	.200
10	16	1	Rear	+0.5	.272	.05	.200	.214	.200
11	17	1	Front	+1.5	.272	.05	.200	.521	.200
12	18	1	Front	-0.5	.272	.05	.200	.273	.200
13	19	1	Front	+1.5	.136	.05	.200	.267	.200
14	20	1	Front	-0.5	.136	.05	.200	.141	.200
15	21	3	Front	+0.5	.136	.05	.200	.204	.200
16	22	3	Rear	+0.5	.136	.05	.200	.082	.200

SEE FIGURE 16 FOR DEFINITION OF PARAMETERS

TABLE V. MODEL REFERENCE QUANTITIES

	<u>Full Scale</u>	<u>Model Scale</u>
1. Reference Area	2690 ft ²	6.198 in. ²
2. Reference Length	1328 in.	5.313 in.
3. Reference Span	1328 in.	5.313 in.
4. Base Areas		
Orbiter	427.3 ft ²	0.9857 in. ²
External Tank	572.55 ft ²	1.319 in. ²
SRB (one)	365.87 ft ²	0.843 in. ²
5. Balance Moment Center (from individual model nose)		
Orbiter		3.7 in.
External Tank		4.104 in.
SRB		4.202 in.
6. Moment Reference Center		
Orbiter	Orbiter nose on E.T. \bar{C}	
External Tank	Orbiter nose on E. T. \bar{C}	
SRB	Orbiter nose on S.R.B. \bar{C}	

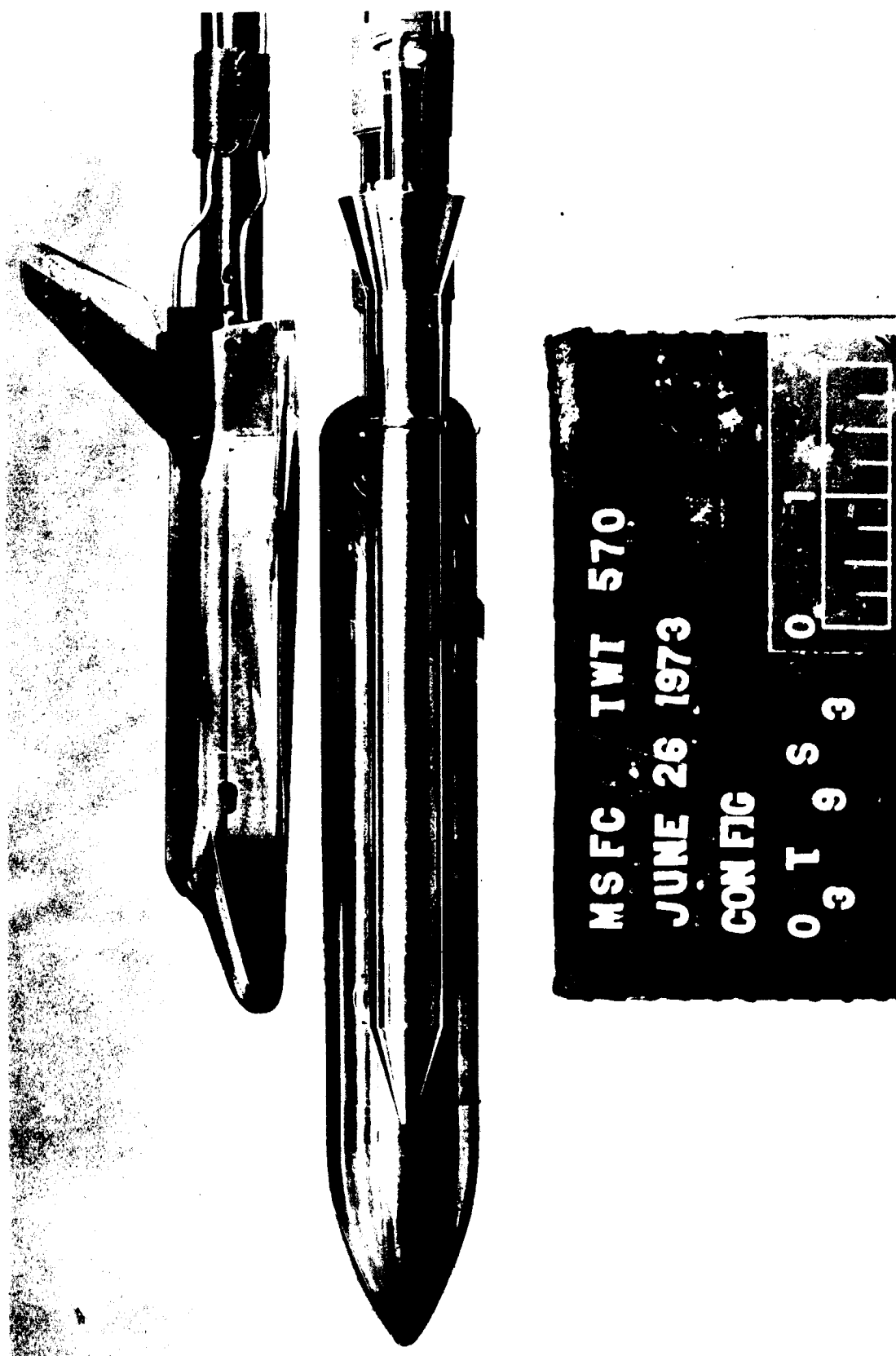
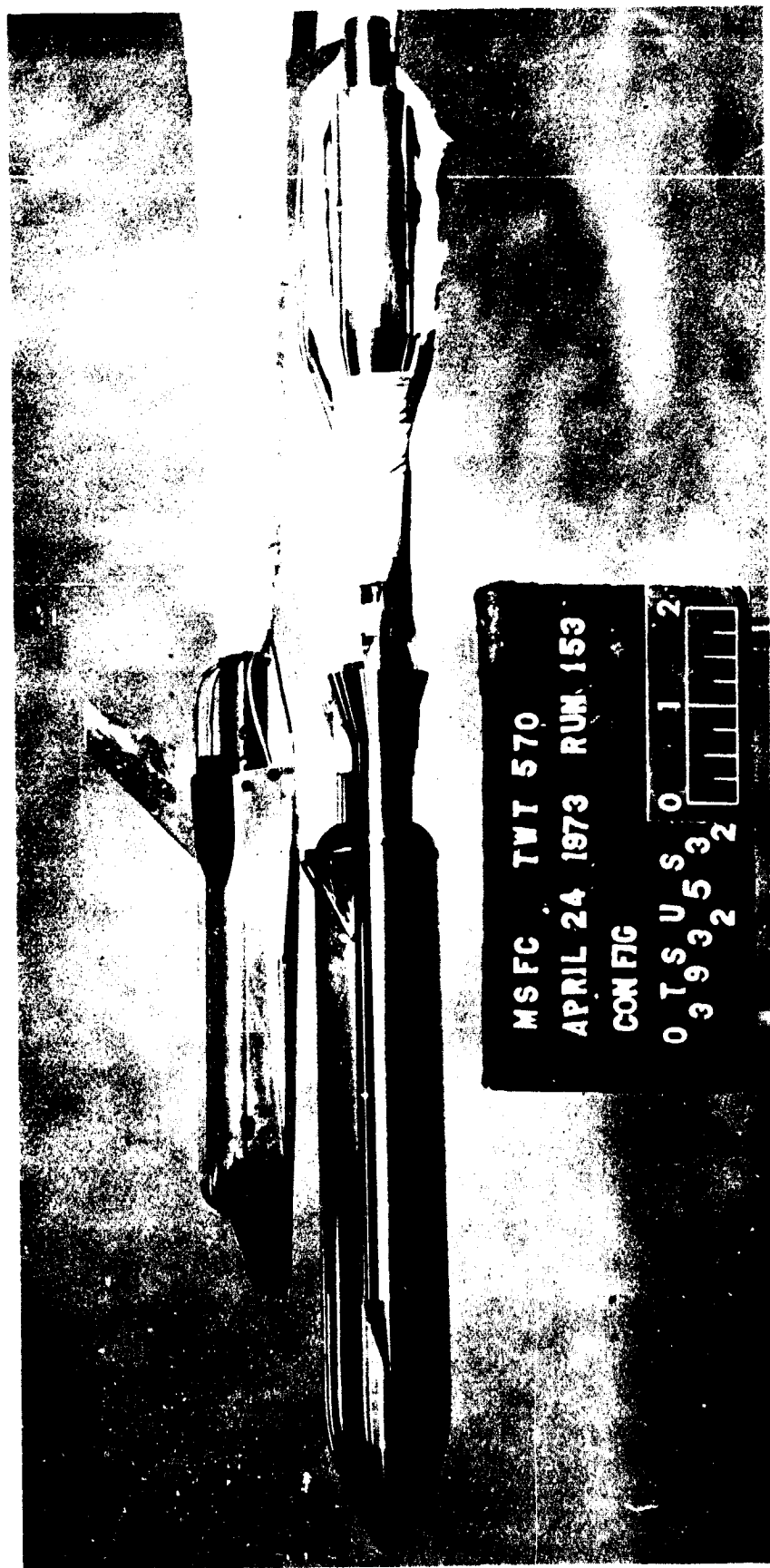


Figure 1. TYPICAL TUNNEL INSTALLATION OF BASIC CONFIGURATION



MSFC TWT 570
APRIL 24 1973 RUN 153
CON FIG

0 T S U S 0 1 2
3 9 3 2 5 3 2

Figure 2. TYPICAL TUNNEL INSTALLATION OF BASIC CONFIGURATION WITH ATTACH HARDWARE

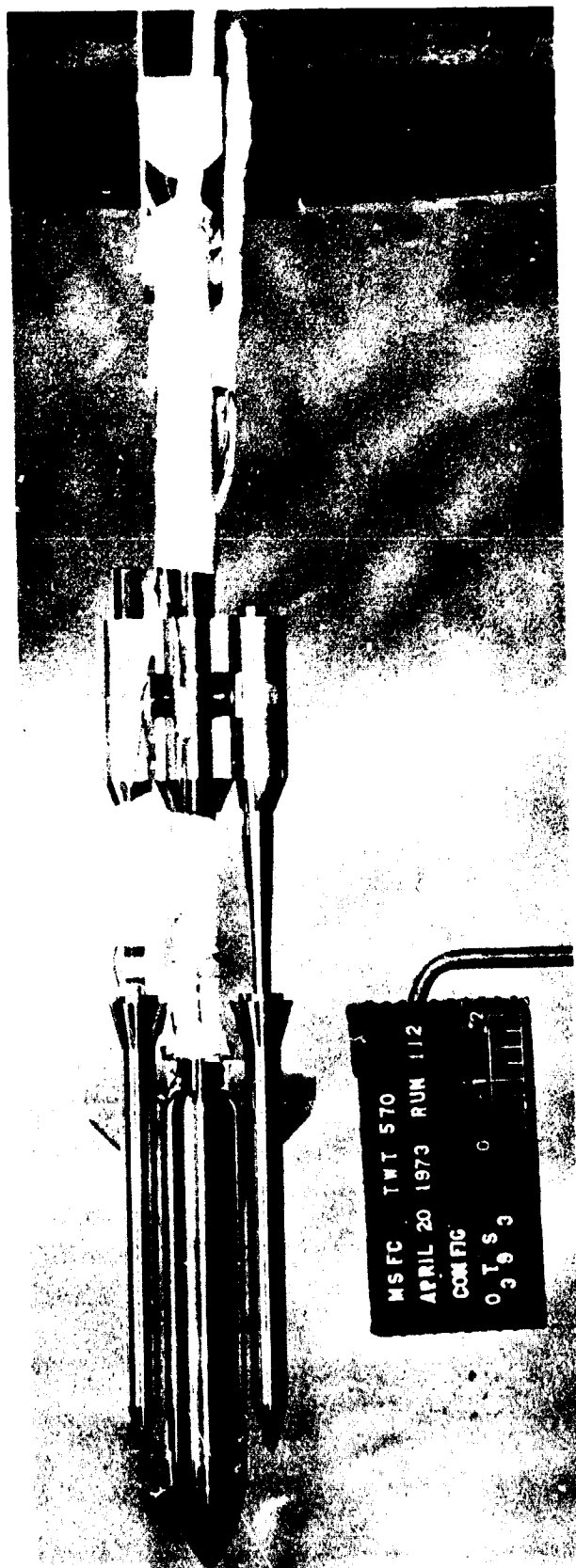


Figure 3. TUNNEL INSTALLATION OF BASIC CONFIGURATION ($\phi=90^\circ$)



Figure 4. EXTERNAL TANK NOSE CONFIGURATIONS

ALL DIMENSIONS ARE INCHES MODEL SCALE

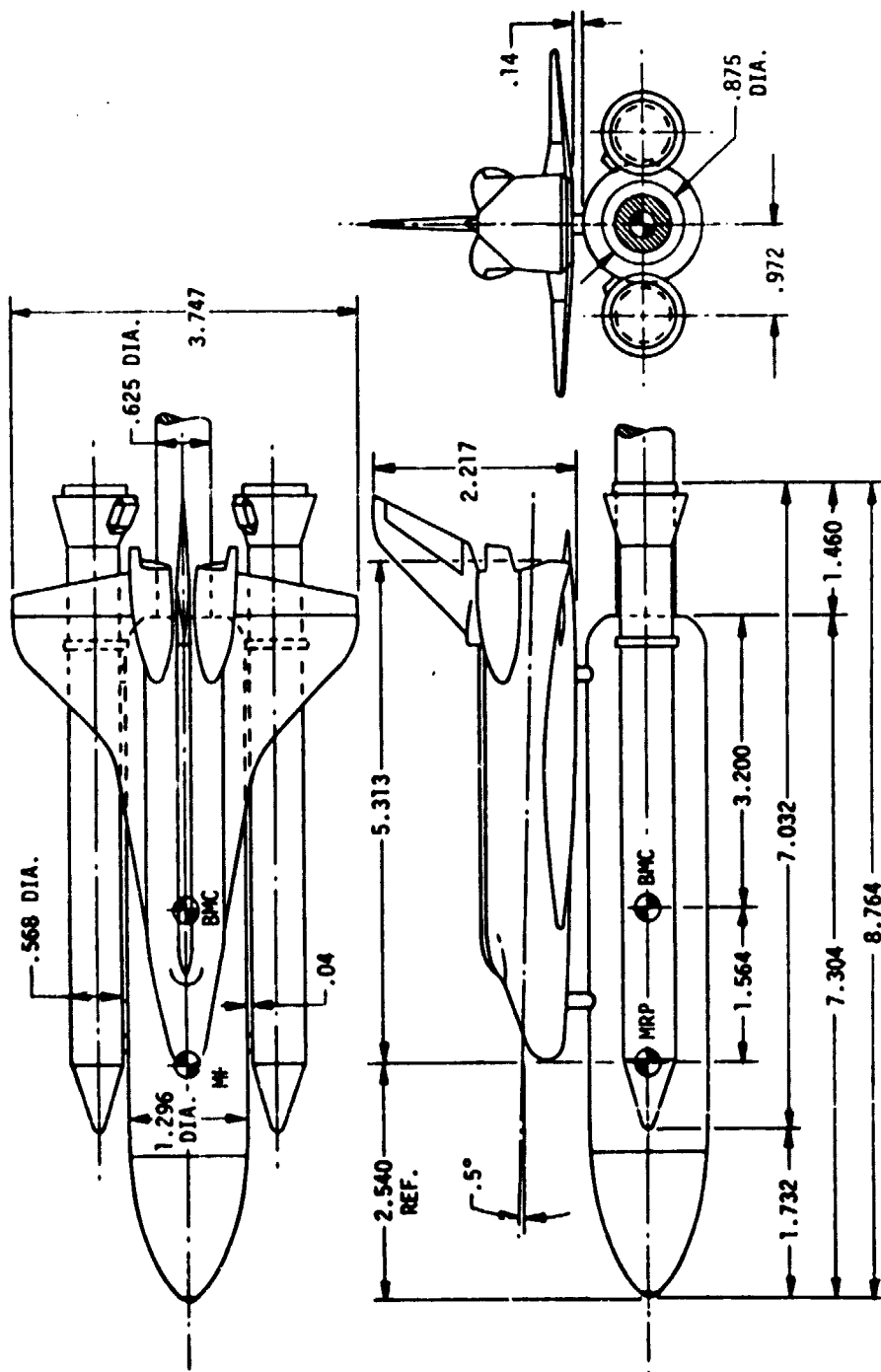


Figure 5: GENERAL ARRANGEMENT OF THE MODEL CONFIGURATION 0₃T₉S₃

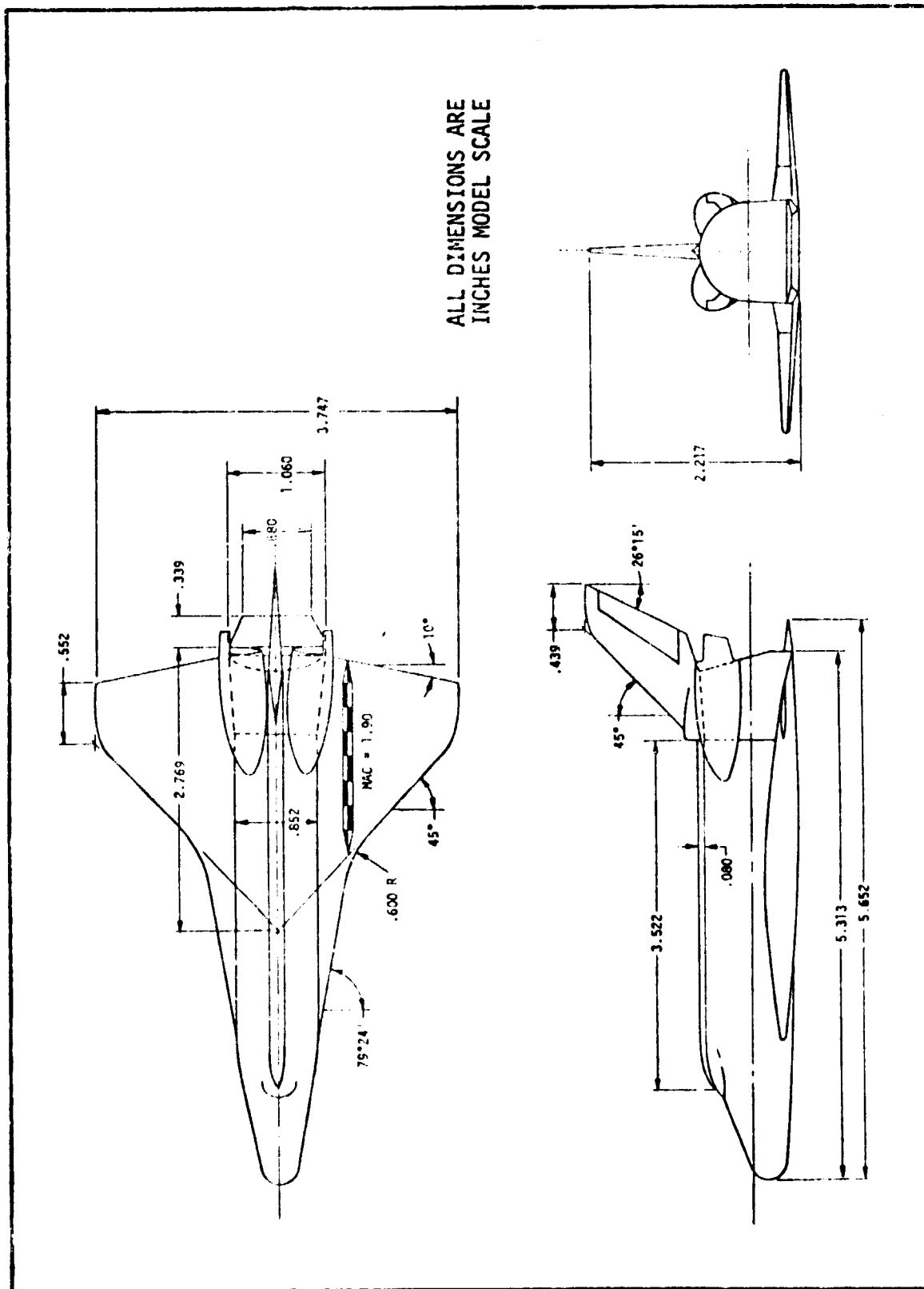


Figure 6. GENERAL ARRANGEMENT OF PRR ORBITER MODEL, O₃

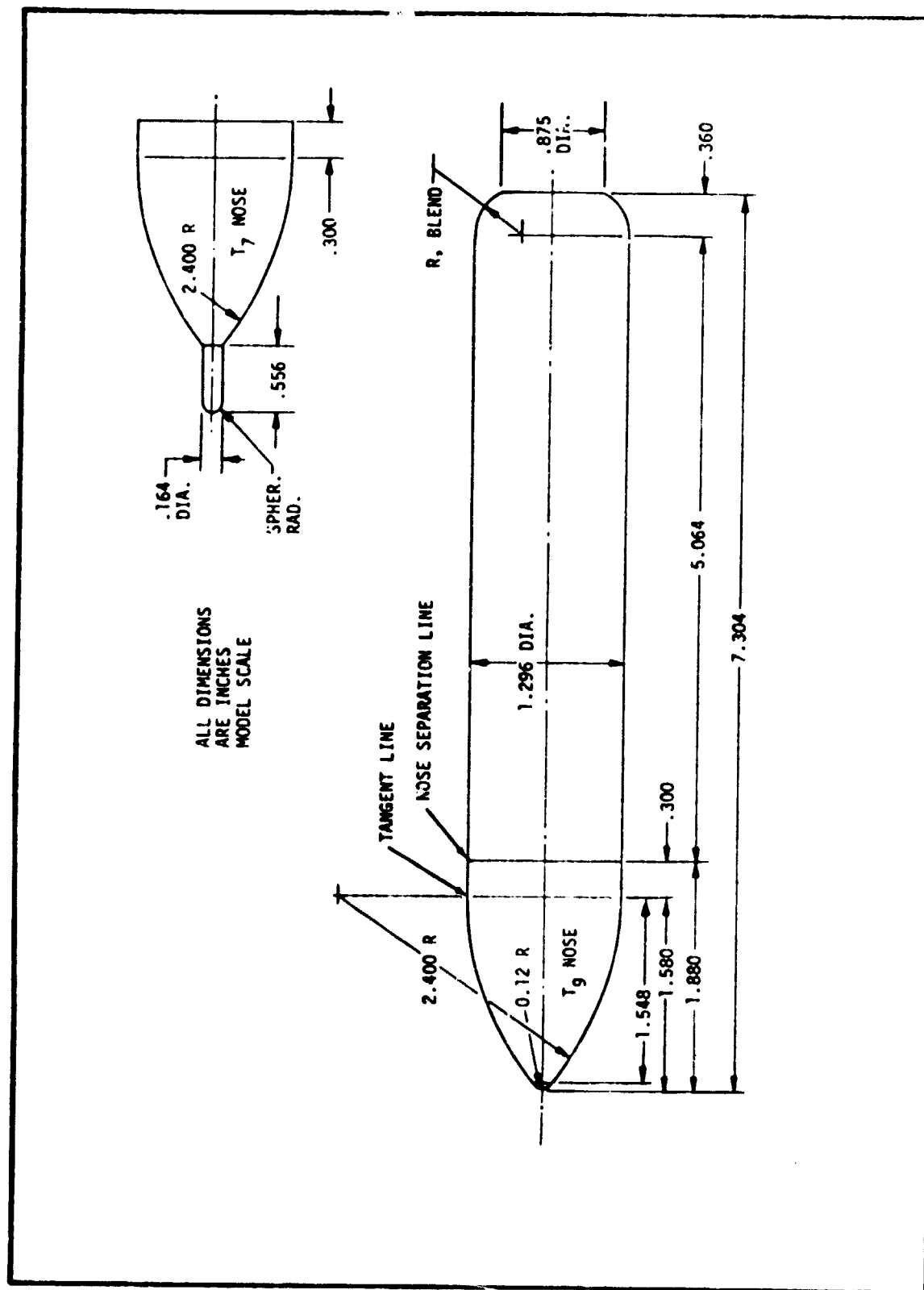
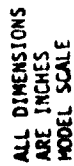


Figure 7. GENERAL ARRANGEMENT OF THE EXTERNAL TANKS T₇ AND T₉



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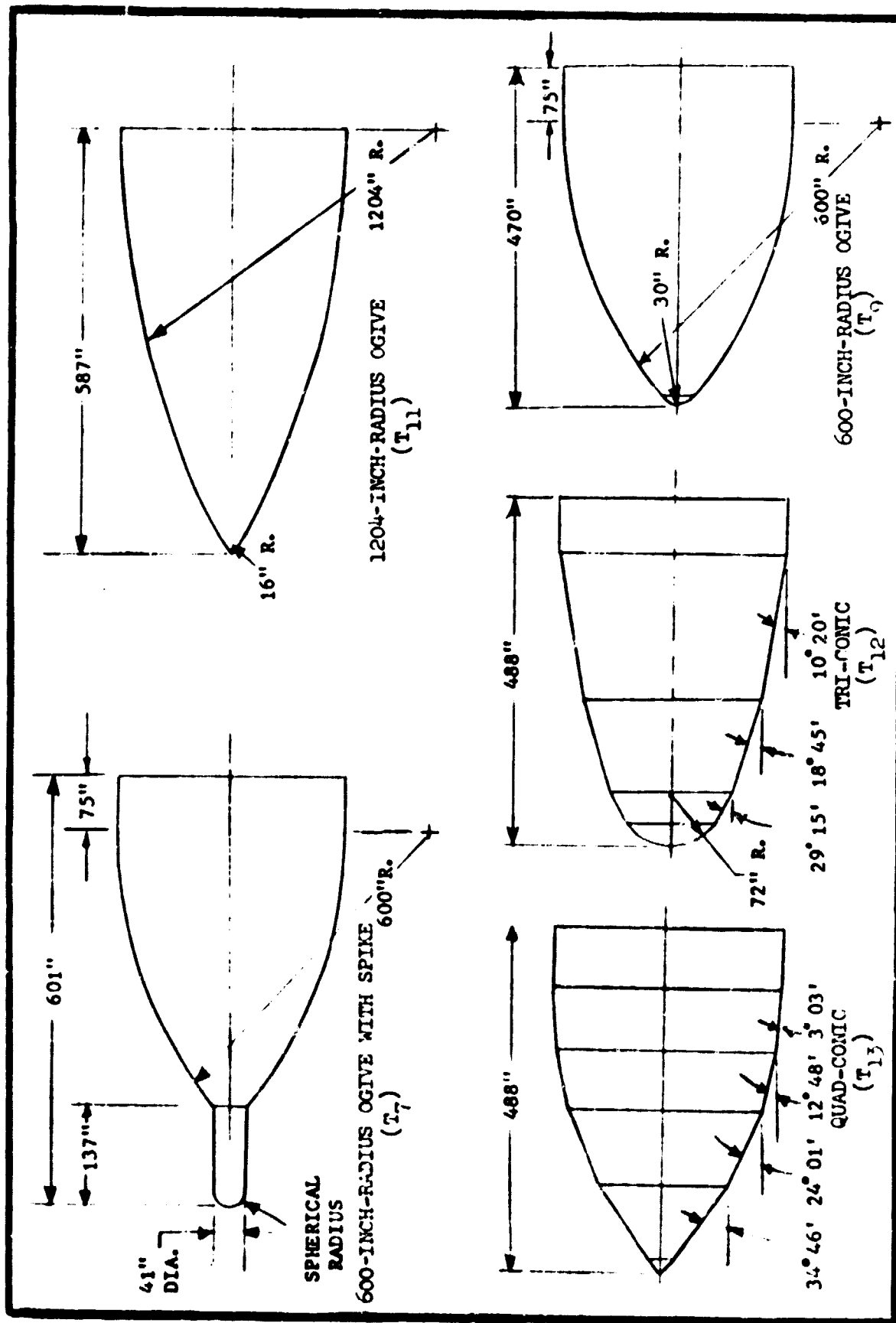


Figure 9. TANK NOSE SHAPES

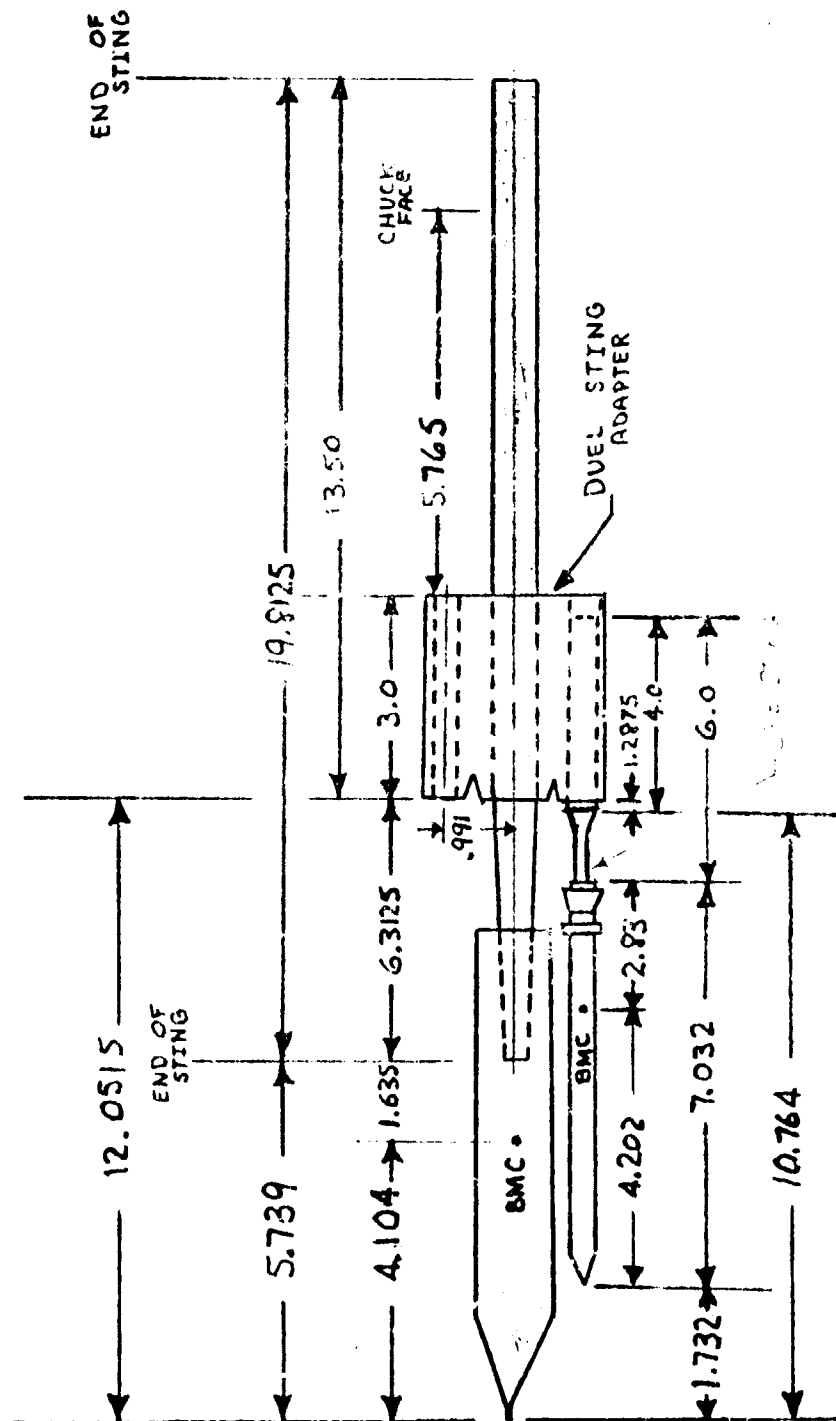
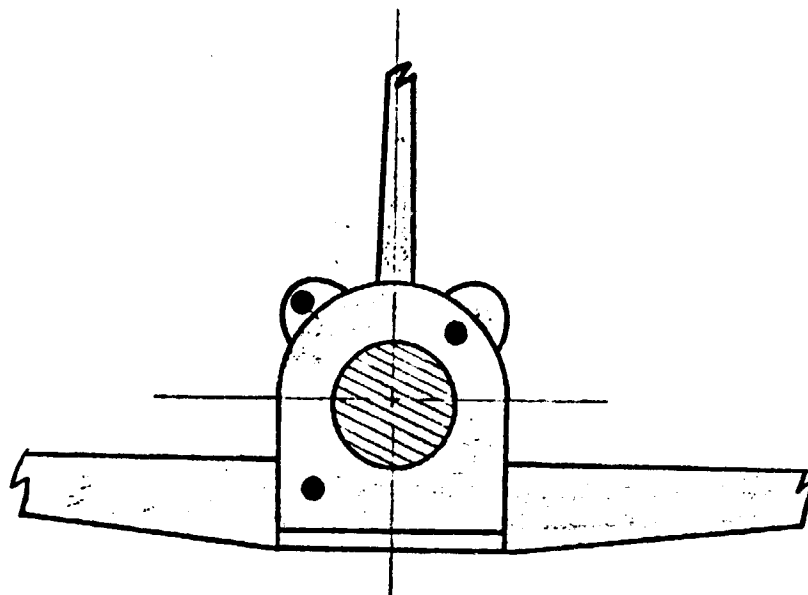


Figure 10. TANK AND SRB WITH SUPPORT HARDWARE



● — BASE PRESSURE MEASUREMENTS

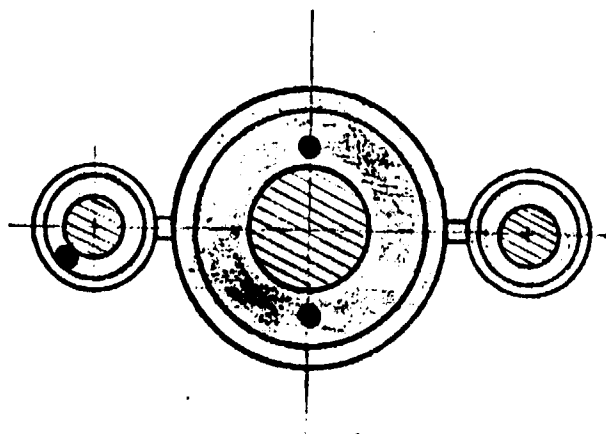


Figure 11. BASE PRESSURE PROBE LOCATIONS

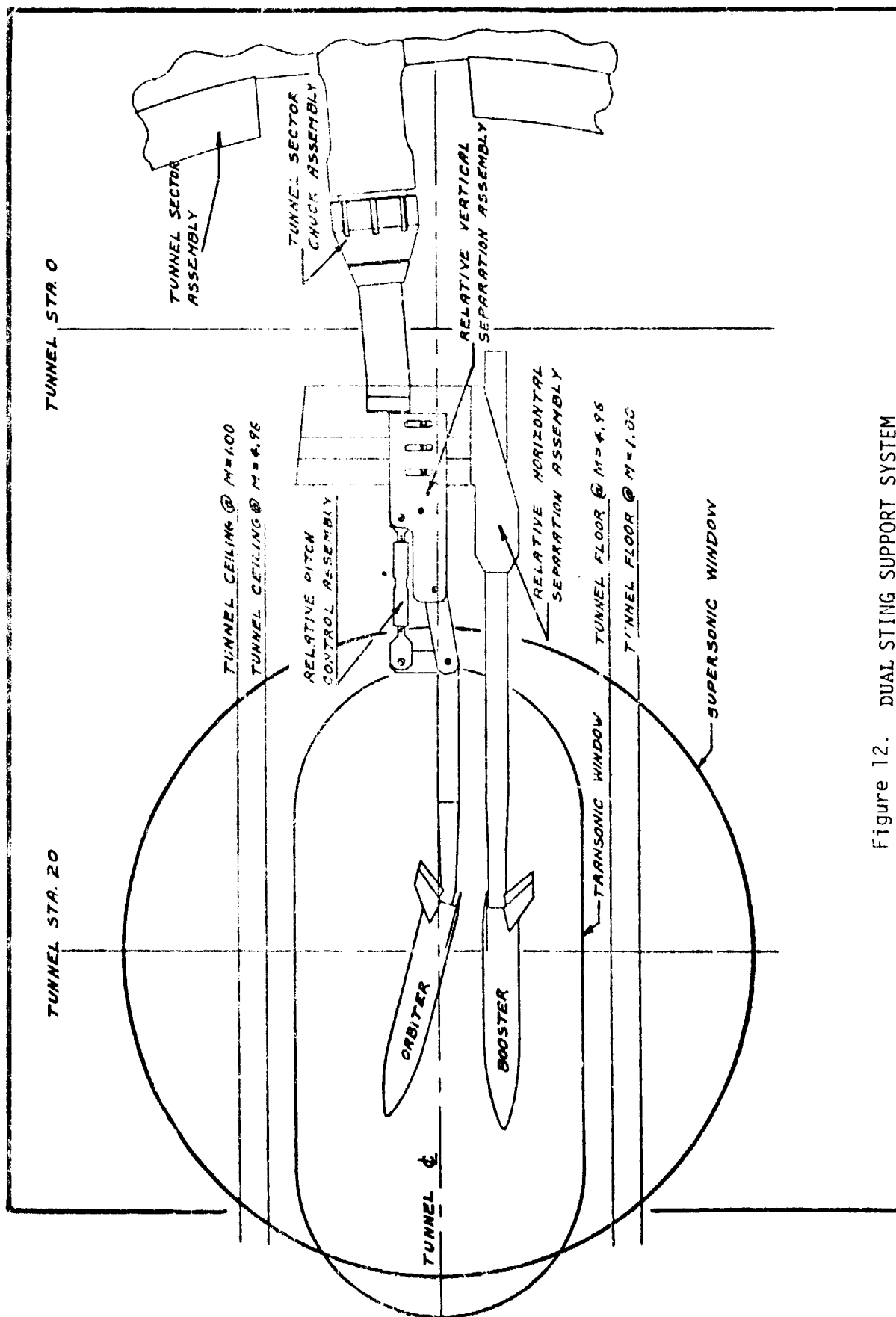


Figure 12. DUAL STING SUPPORT SYSTEM

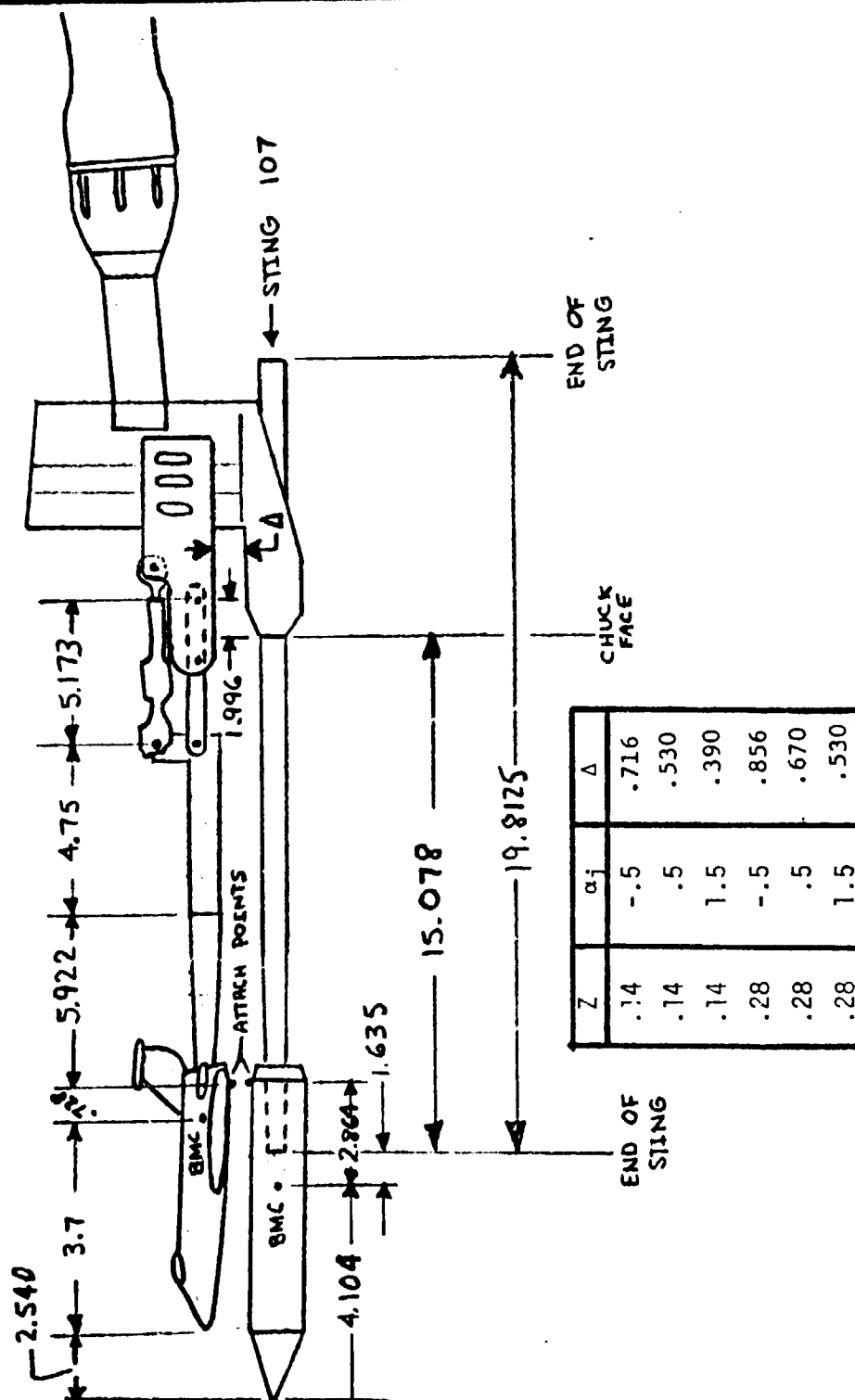


Figure 13. ORBITER AND TANK MODELS WITH SUPPORT HARDWARE

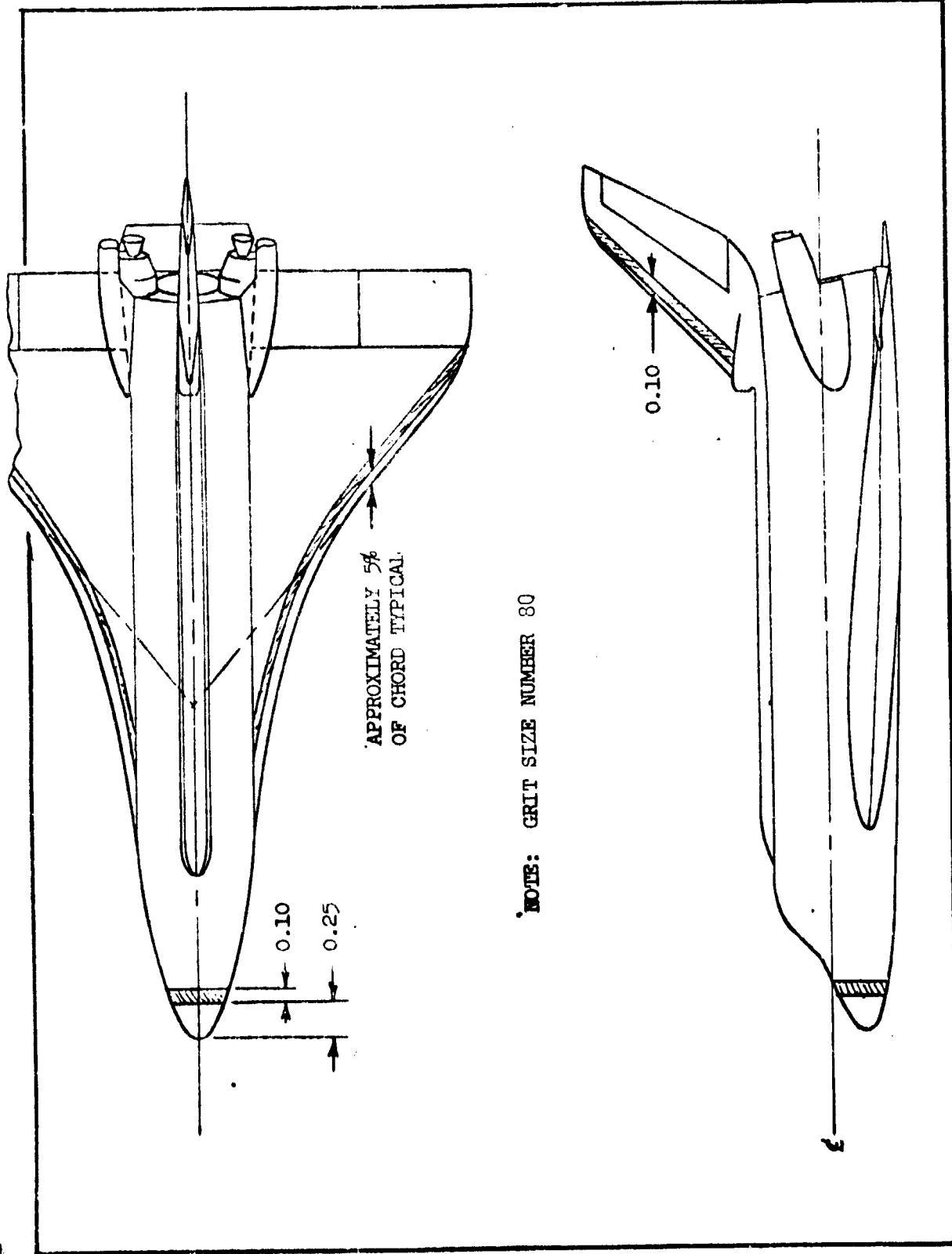


Figure 14. LOCATION OF GRIT ON ORBITER MODEL

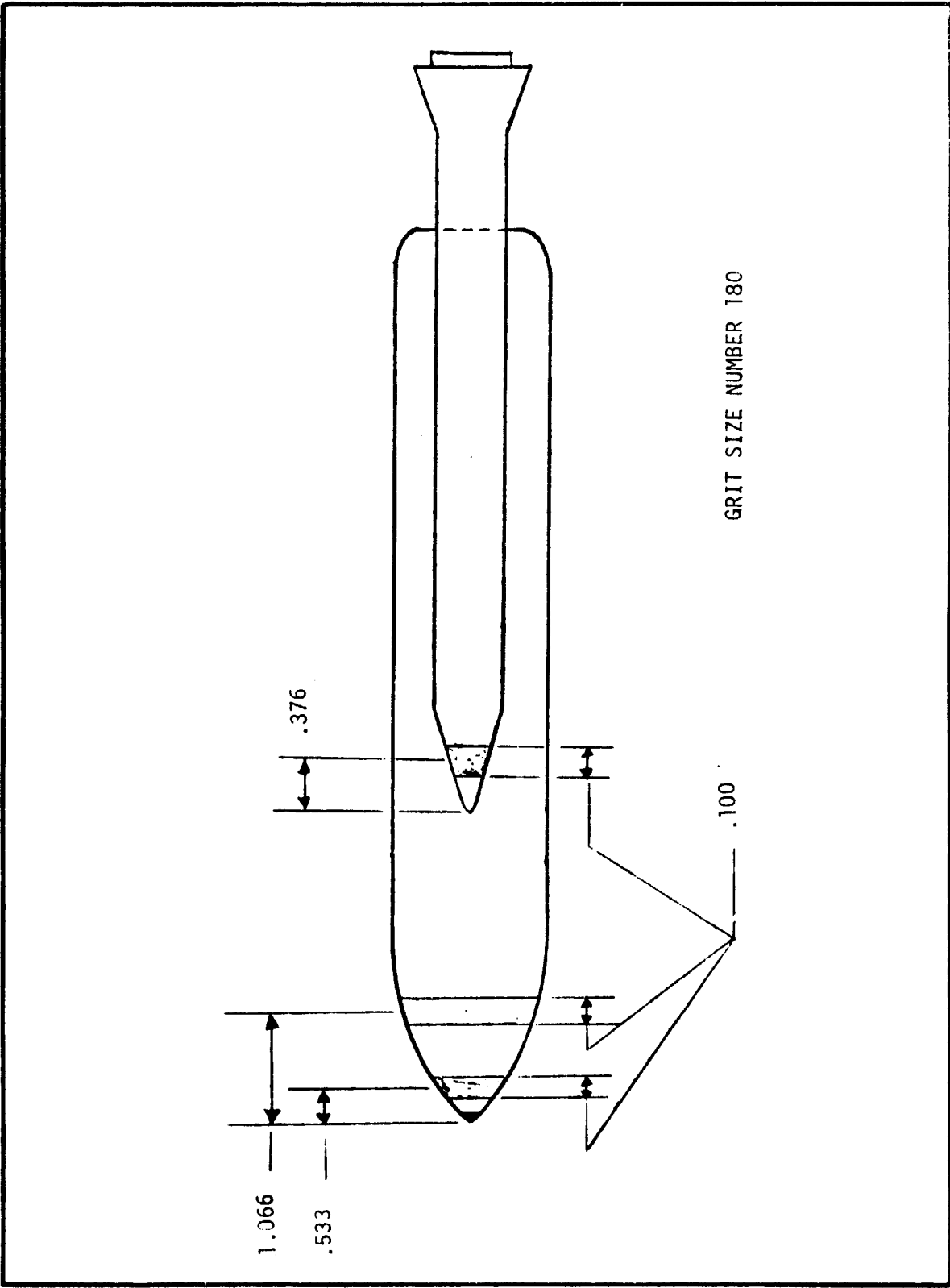


Figure 15. LOCATION OF GRIT ON SRB AND ET MODELS

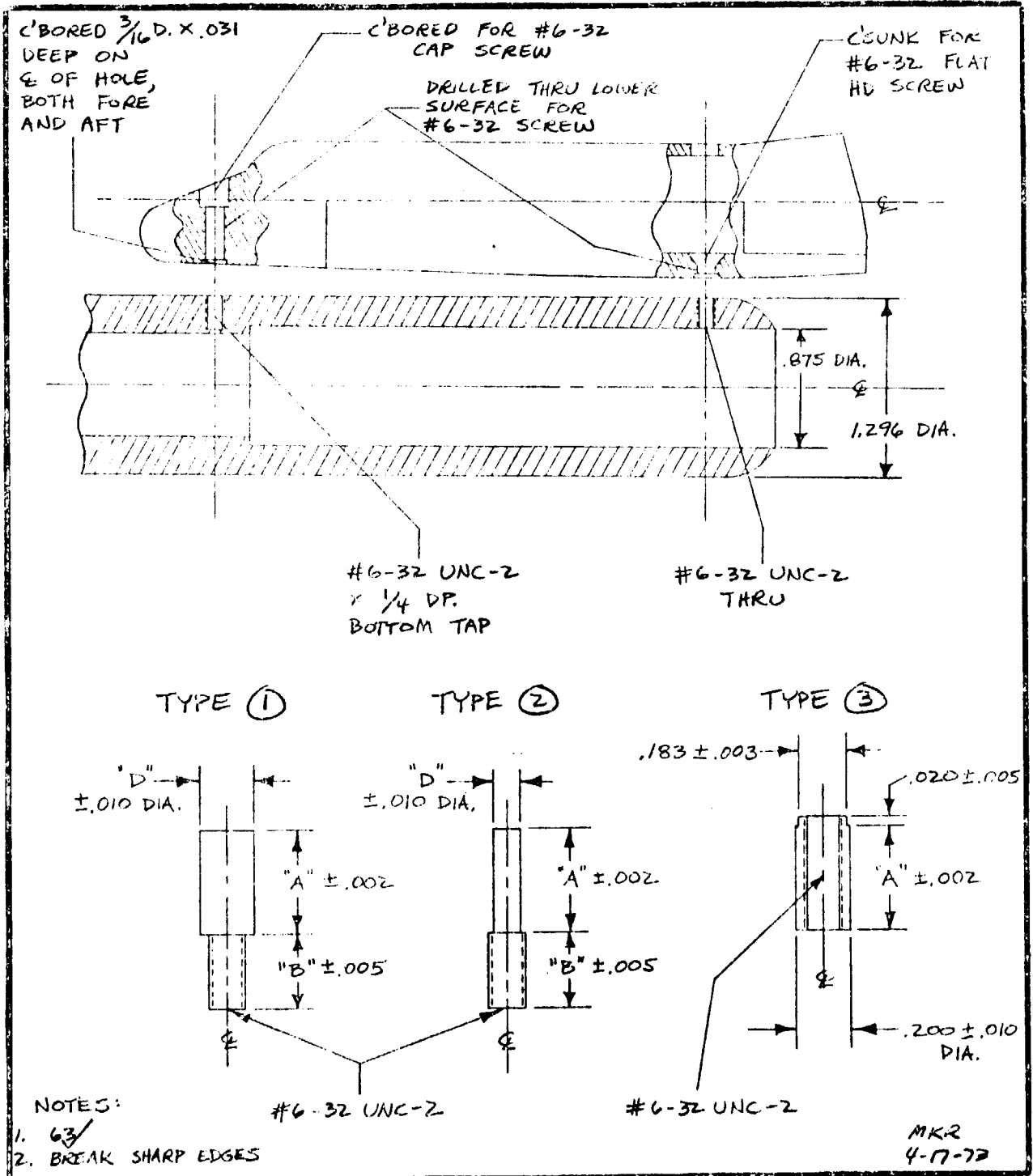


Figure 16. TYPICAL SPACER DIMENSIONS

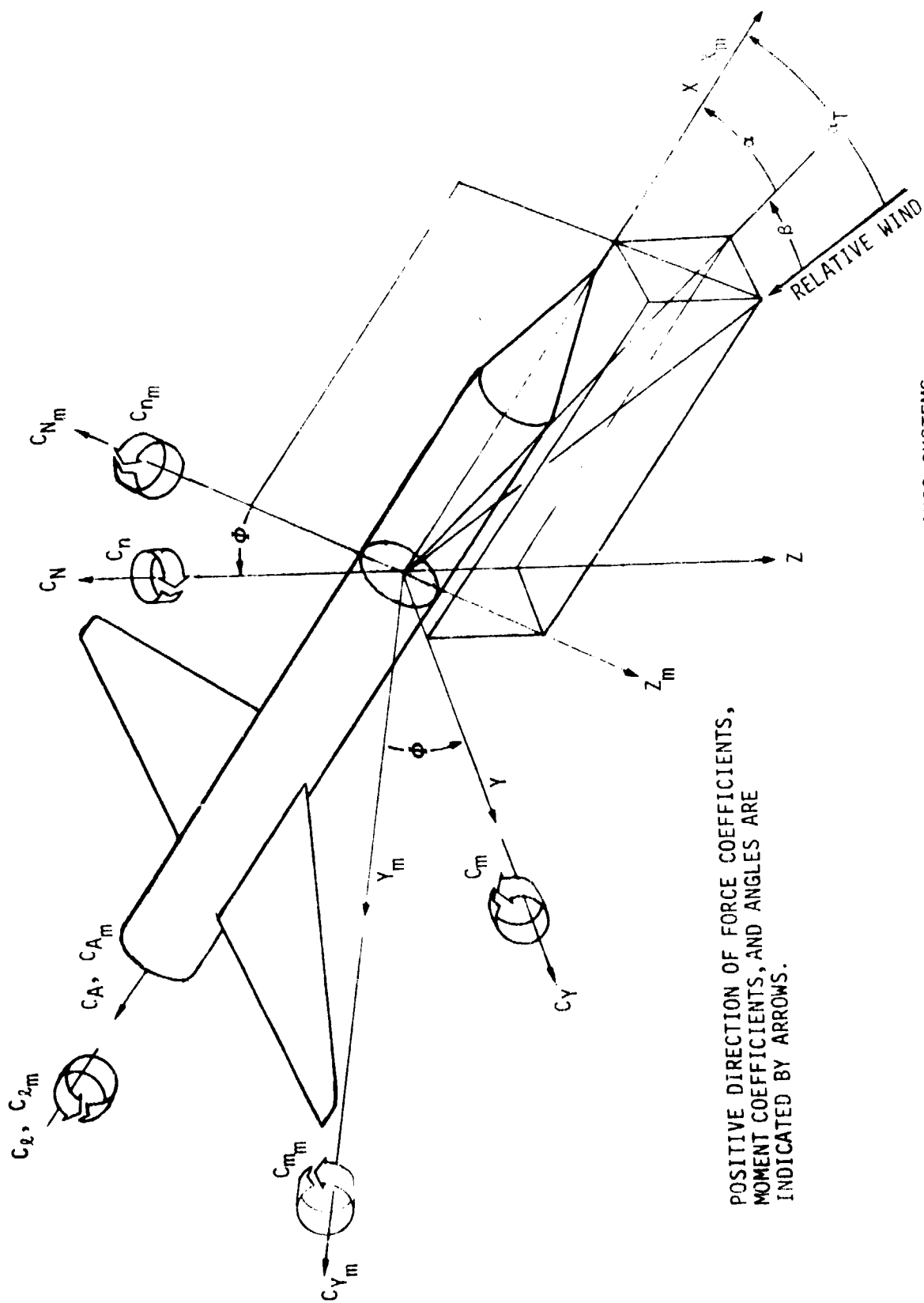


Figure 17. BODY AND MISSILE AXIS SYSTEMS

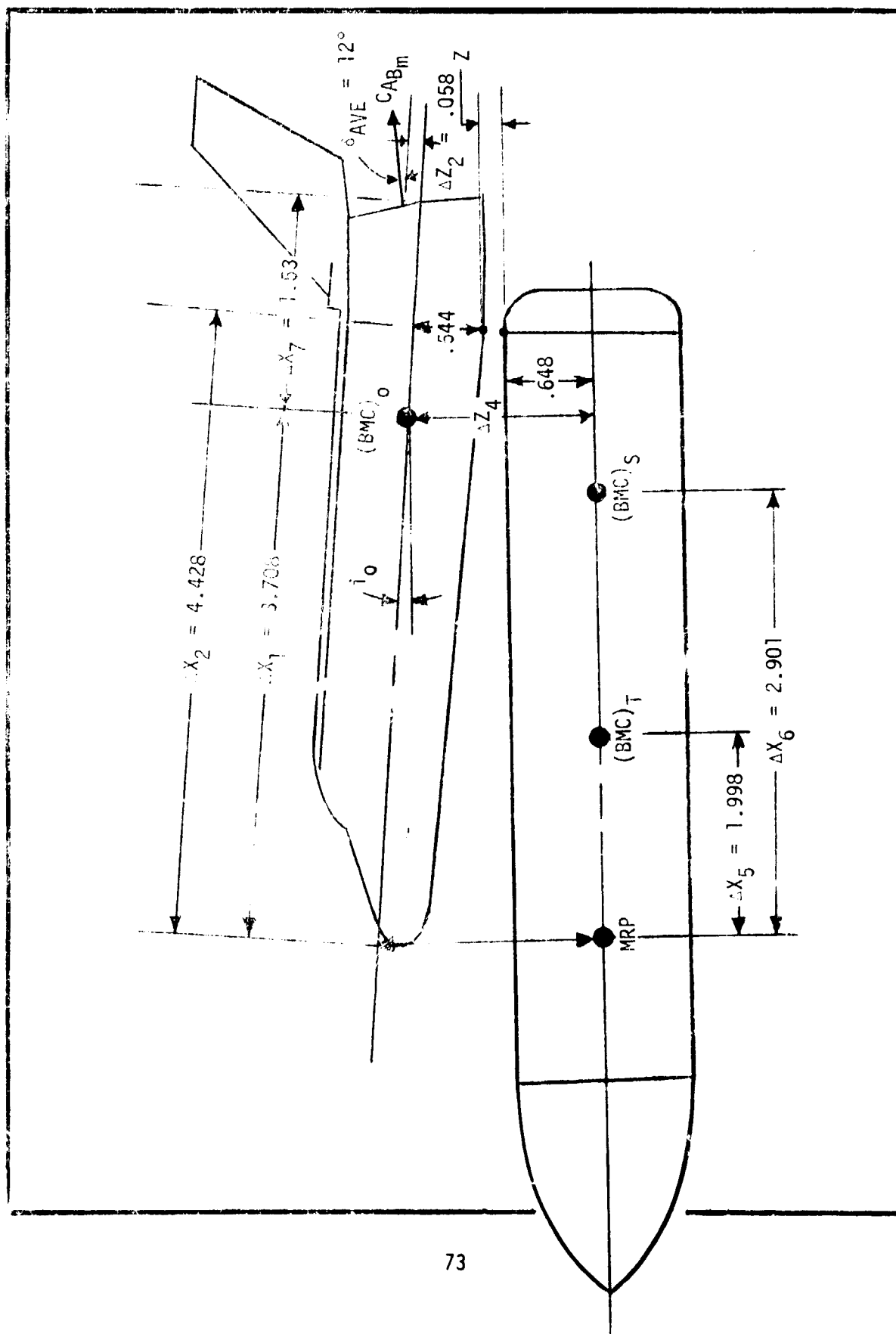
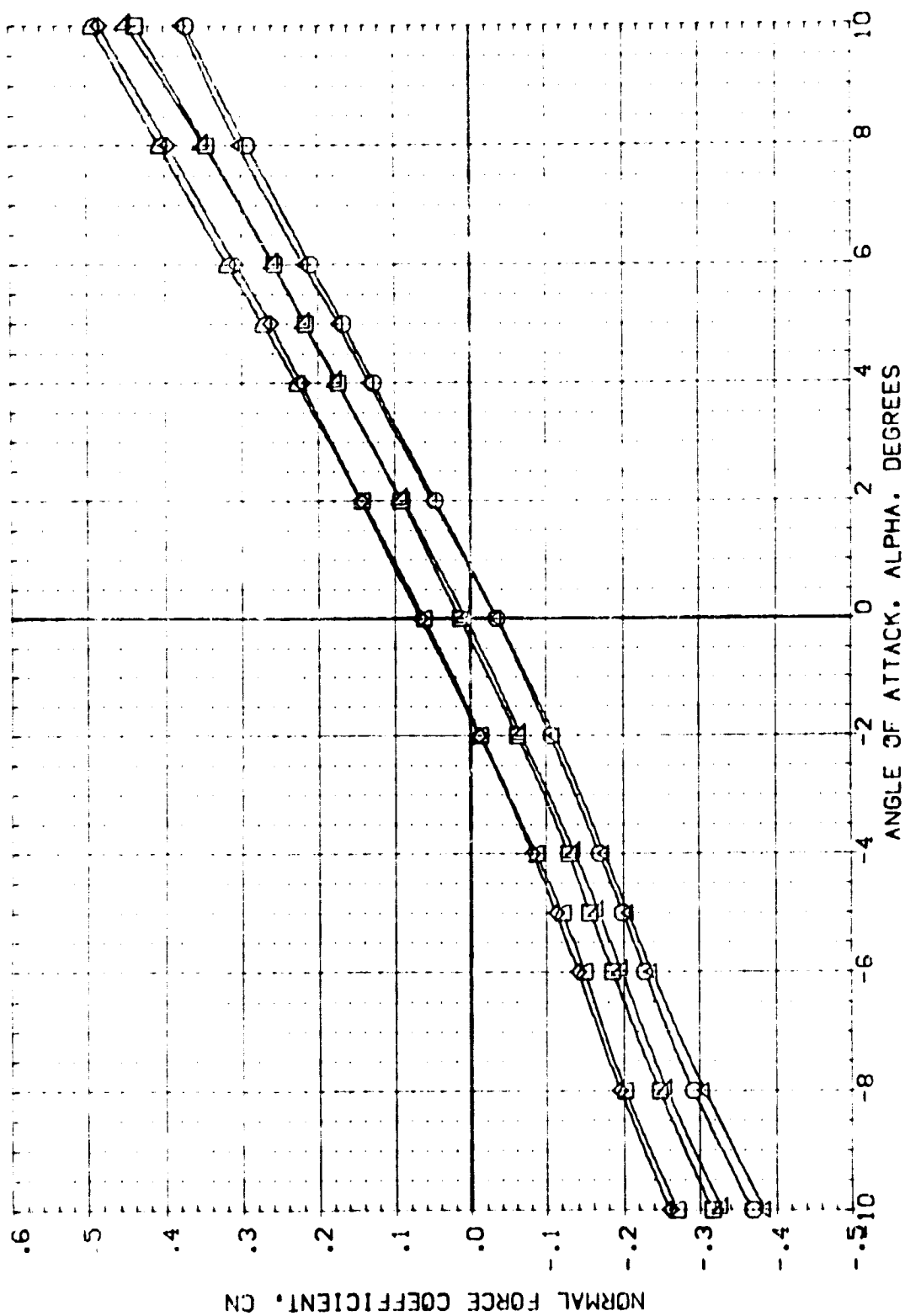


Figure 18. MOMENT TRANSFER INFORMATION

DATA FIGURES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.140	SREF 6.1980
(C83002)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.140	BREF 5.3130
(C83004)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.260	XMRP 2.5490
(C83005)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.280	YMRP .0000
(C83006)	MSFC 5701 (A31F) (031) (T91) (S3/2) (S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



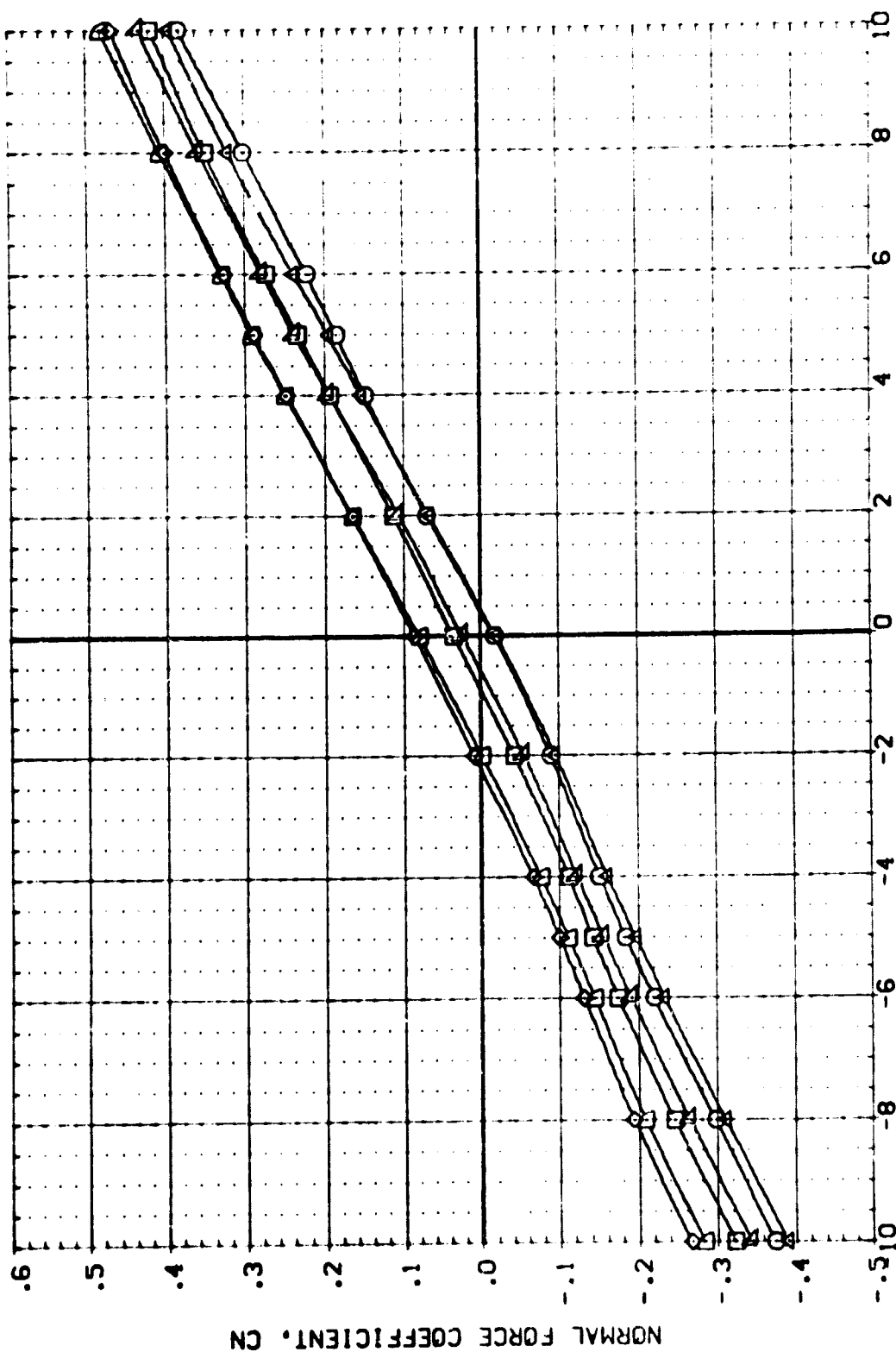
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(A)MAC = .60

PAGE

1

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 IN.
(C83002)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



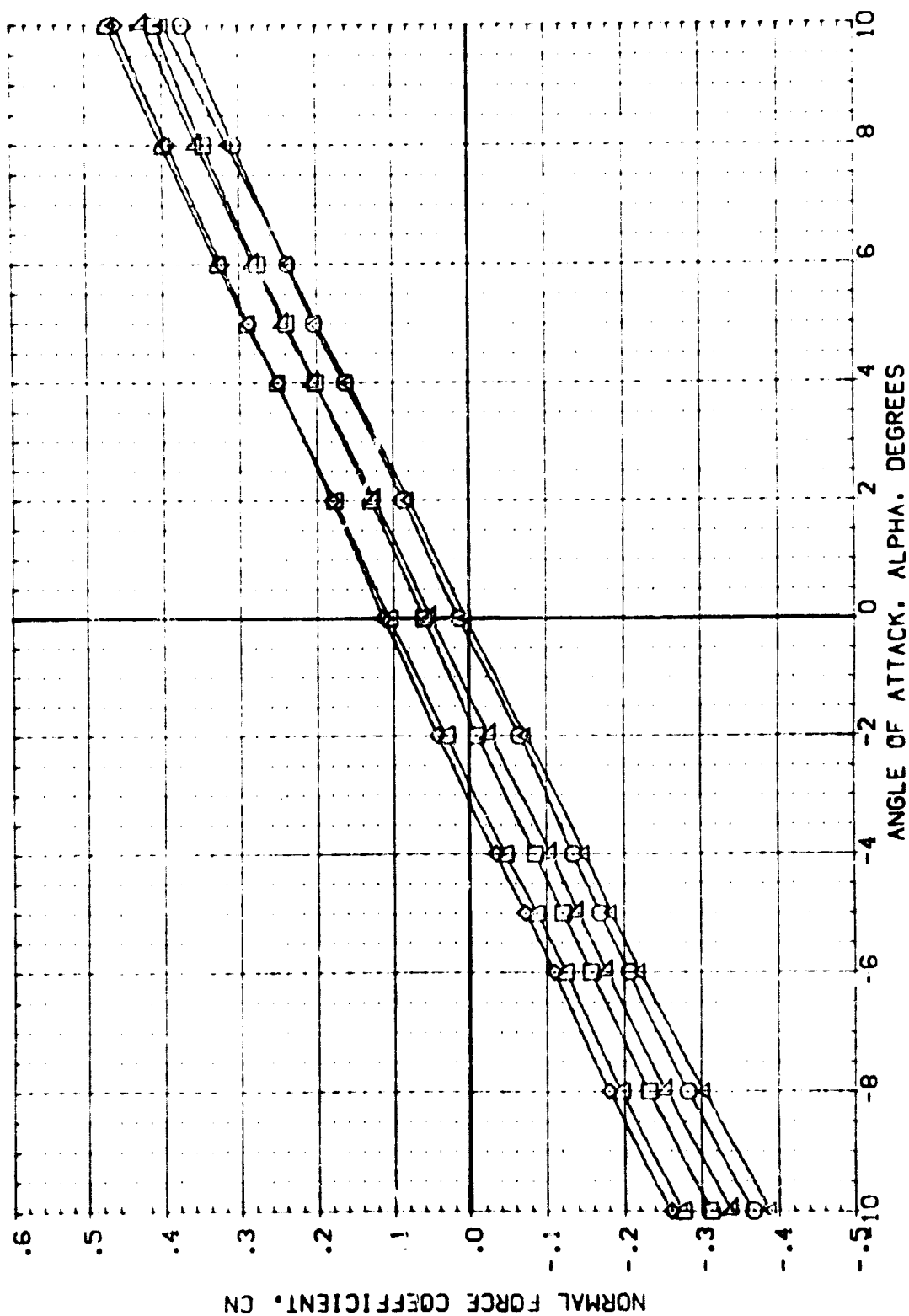
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C83006) = .80

PAGE

2

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83002)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 2.3130
(C83003)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 2.3130
(C83004)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XREF 2.3490
(C83005)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YREF 2.3490
(C83006)	M5C 570(A31F)(Q3)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZREF 2.3490
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(C)MACH = .90

PAGE

3

DATA SET SYMBOL CONFIGURATION DESCRIPTION

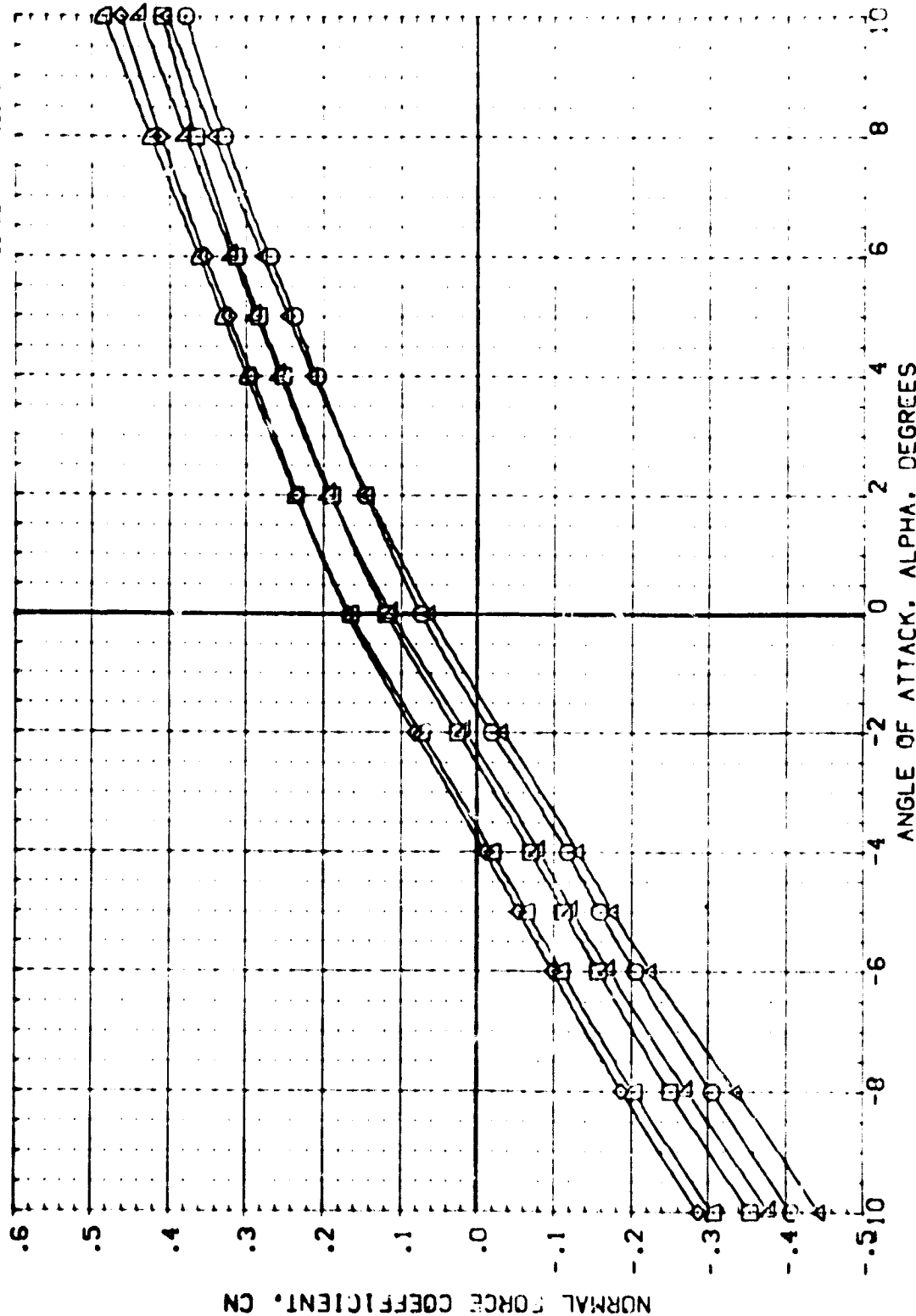
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBIT INC DELTA Z

.000	.500	.140
.000	.500	.140
.000	.500	.140
.000	.500	.280
.000	.500	.280
.000	.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO	IN
LREF	5.3130		
BREF	5.3130		
XMRP	2.5450		
YMRP	.0000		
ZMRP	.0000		
SCALE	.0040		



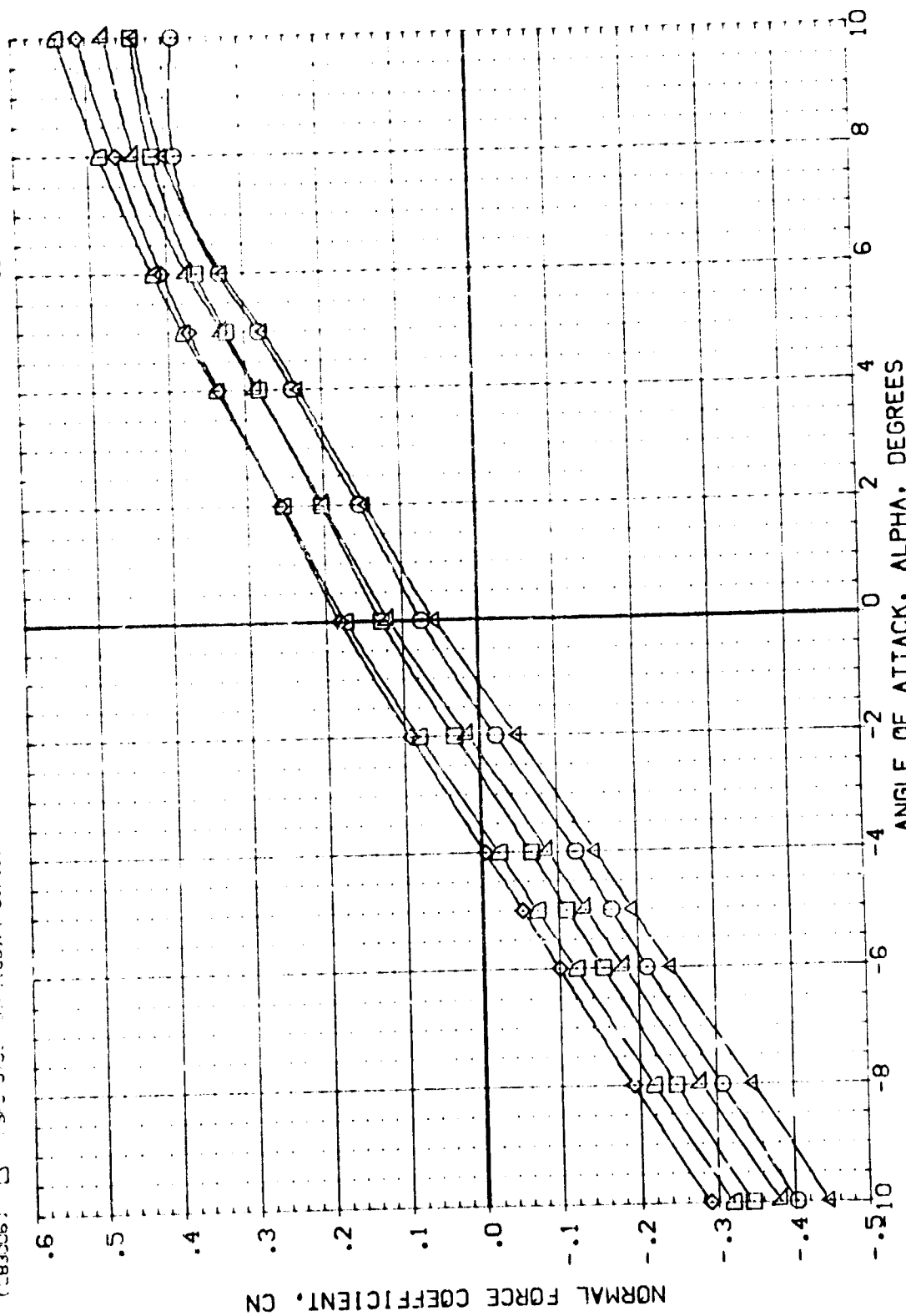
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(MACH = 1.05)

PAGE

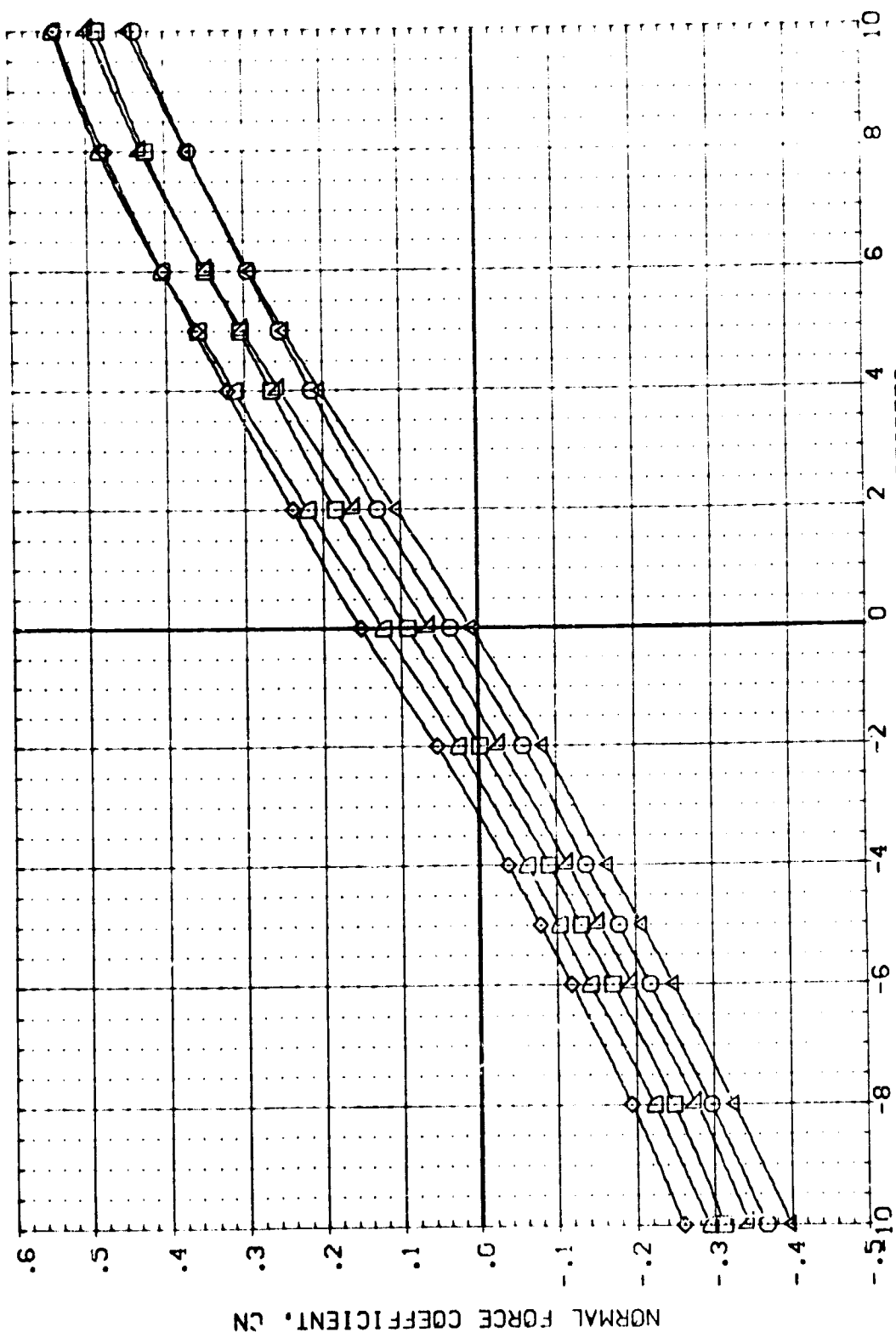
4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITER	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	-.500	.140	SREF 6.1980 SC. IN
(C83002)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	-.500	.280	YMRP 2.5450
(C83005)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	1.500	.280	ZMRP .0000
(C83006)	MSFC 570 (A31F) (03) (T9) (S3/2) / (S3/2)	.000	1.500	.280	SCALE .0040



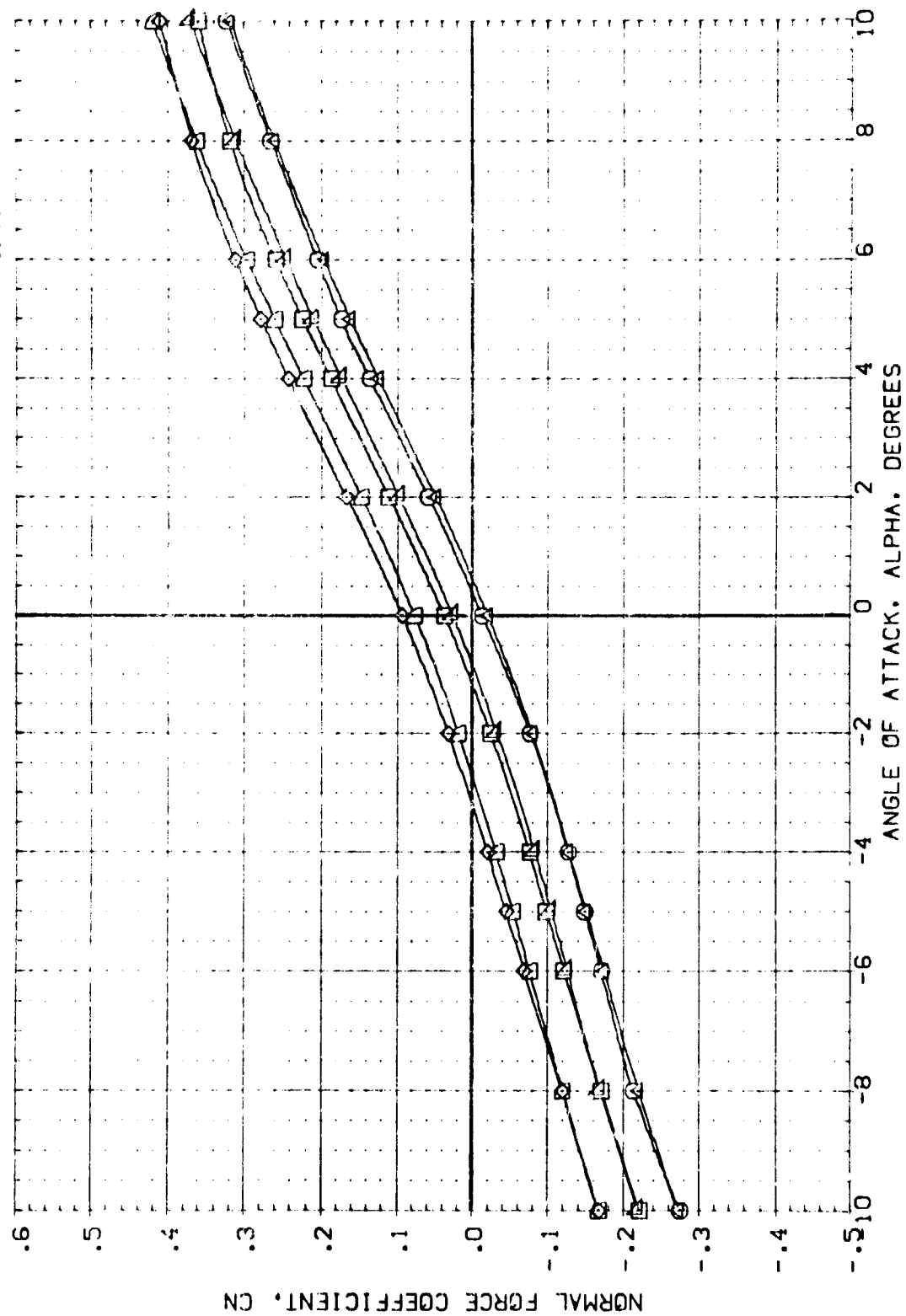
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	SREF 6.1960 SO. IN
(C83002)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	YMRP 2.5493 IN.
(C83005)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	ZMRP .0000 IN.
(C83006)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.140	BREF 5.3130
(C83004)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.280	XMRP 5.493
(C83005)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.280	YMRP .0000
(C83006)	MSFC 570 (A31F) (Q3) (T9) (S3/2) (S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040

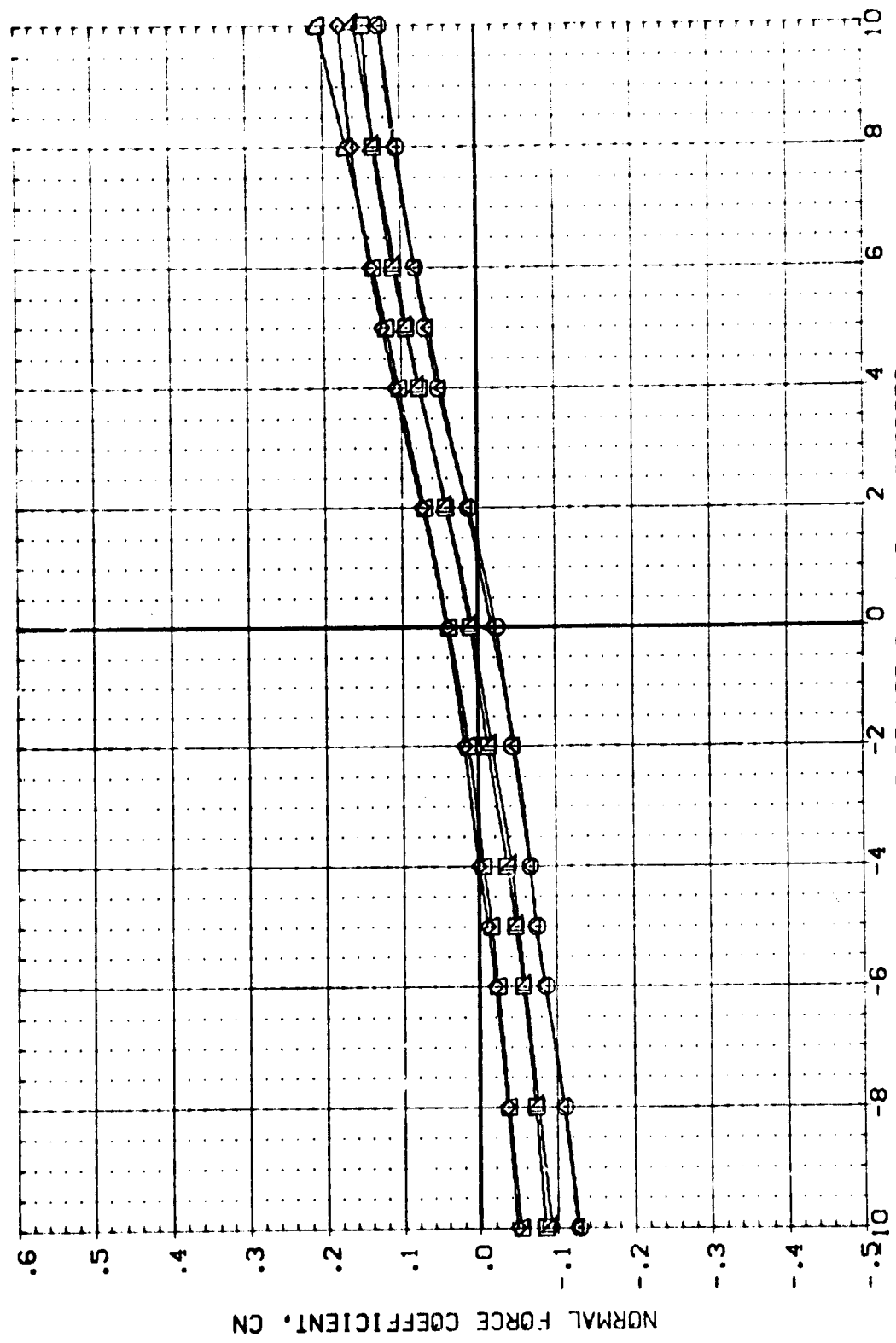


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

CGMACH = 1.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBITING DELTA Z REFERENCE INFORMATION SQ. IN

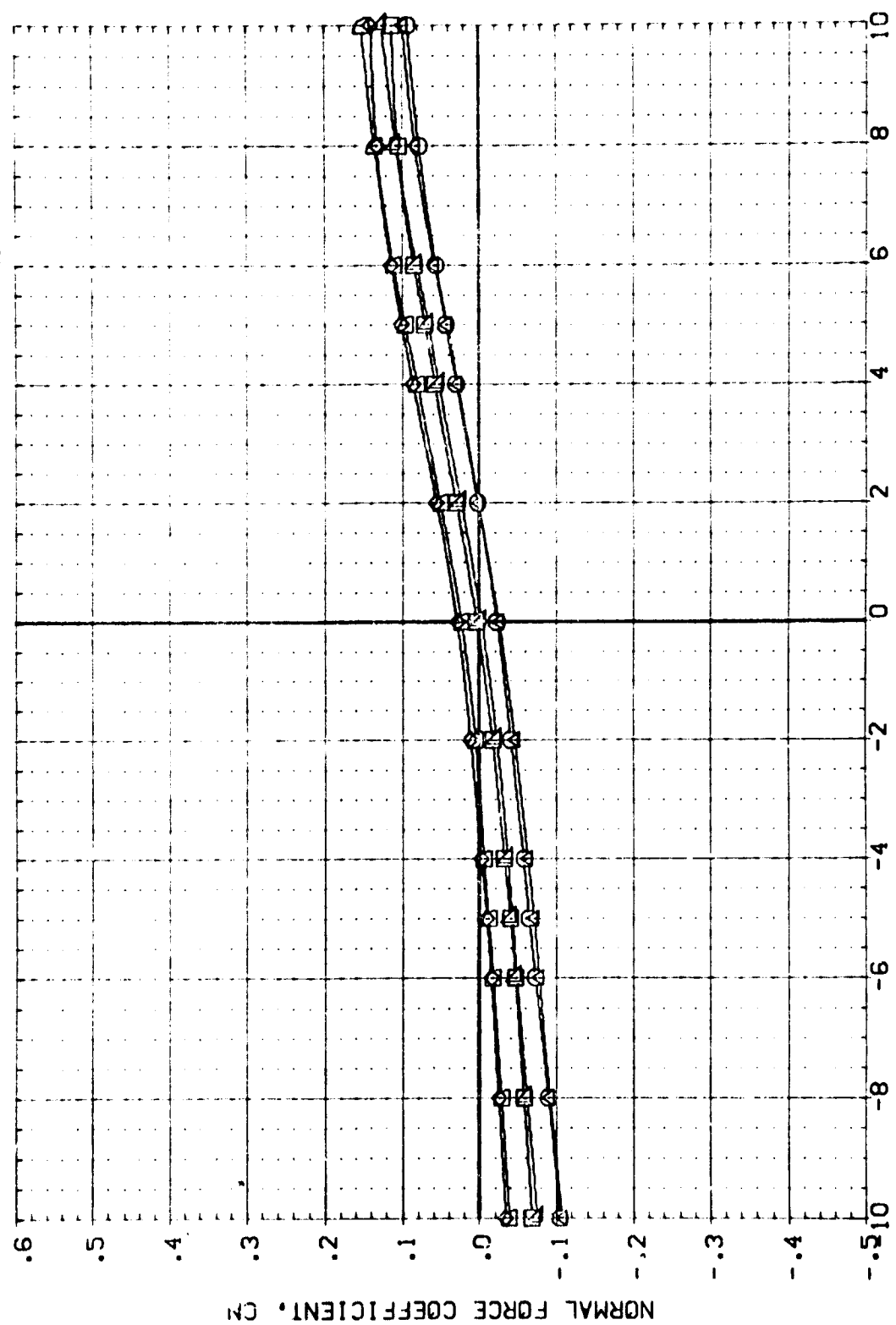
(C83001)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.140	SREF	6.1980	50.00
(C83002)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.140	LREF	5.3130	50.00
(C83003)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.140	BREF	5.3130	50.00
(C83004)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.280	YMRP	2.5490	50.00
(C83005)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.280	ZMRP	.0000	50.00
(C83006)	MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)	.000	-1.500	.280	SCALE	.0040	50.00



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (I9)/(S3/2)/(S3/2)

(H)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.1980 IN
(C83002)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83003)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83004)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN
(C83005)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83006)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN
				SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

CLIMACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83001) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

(C83002) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

(C83003) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

(C83004) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

(C83005) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

(C83006) MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

BETA ORBINC DELTAZ

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .280

.000 .500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980 SQ. IN

LREF 5.3130

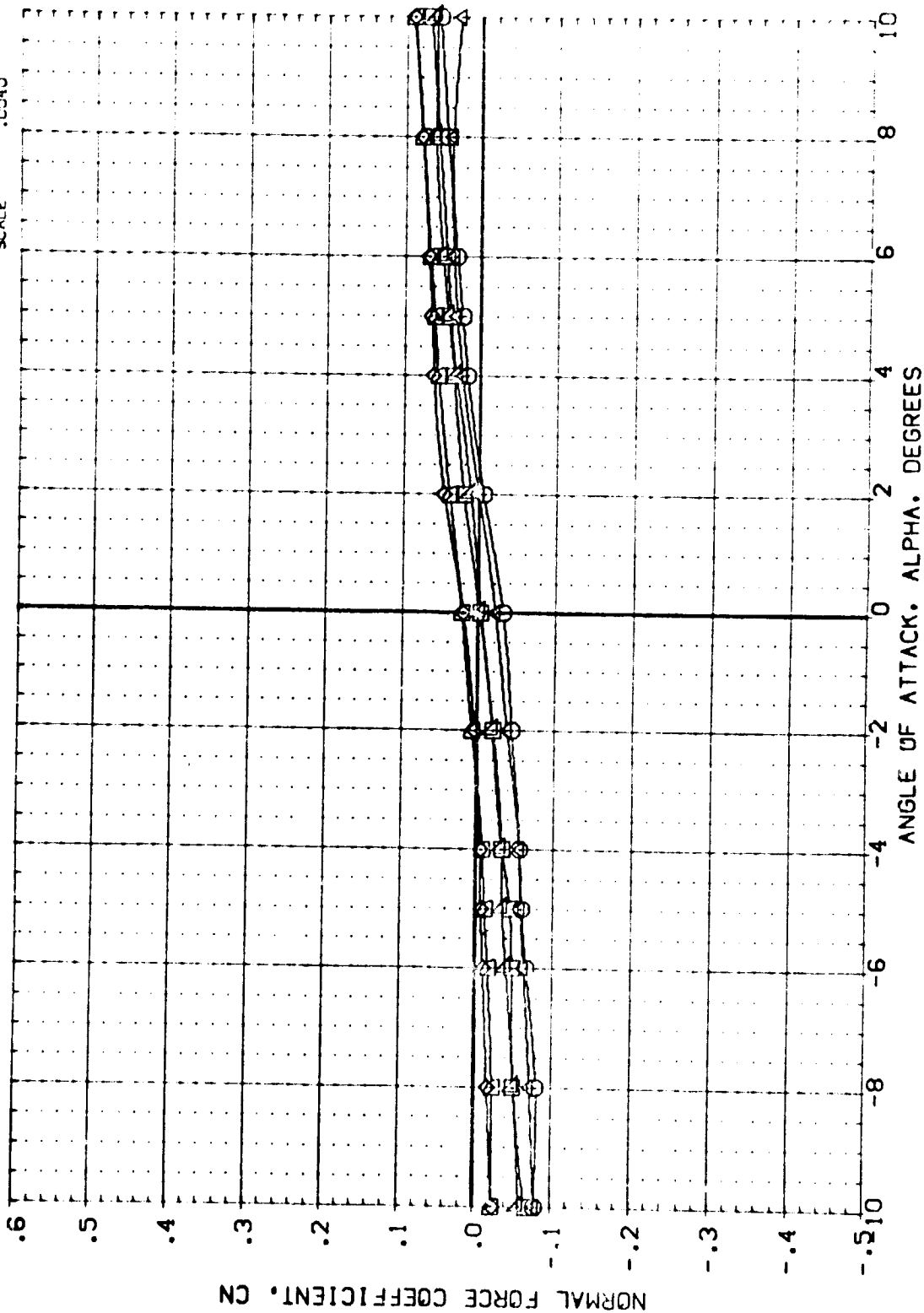
BREF 5.3130

XMRP 2.549C

YMRP .0000

ZMRP .0000

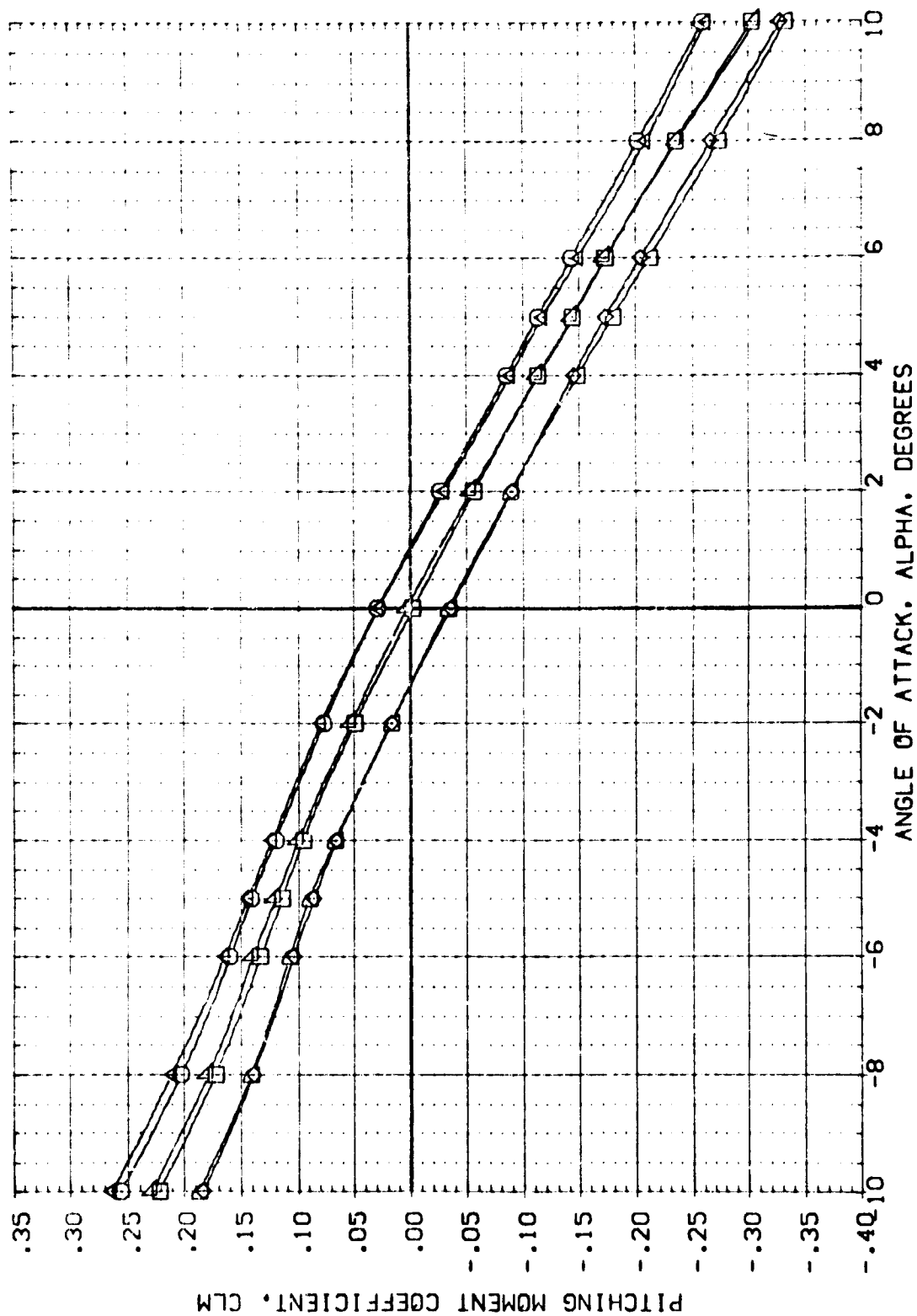
SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SCALE
(C83001)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.140	SREF	6.1980
(C83002)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.140	LREF	5.3130
(C83003)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.140	BREF	5.3130
(C83004)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.280	XREF	2.5490
(C83005)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.280	YREF	.0000
(C83006)	MSFC 570((IA3IF)(O3)/((T9)/(S3/2)))/(S3/2)	.000	.500	.280	ZREF	.0000
					SCALE	.0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(A)MACH = .60

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83001) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

(C83002) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

(C83003) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

(C83004) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

(C83005) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

(C83006) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBITAL DELTA Z

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .280

.000 .500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980 SQ IN

LREF 5.3130

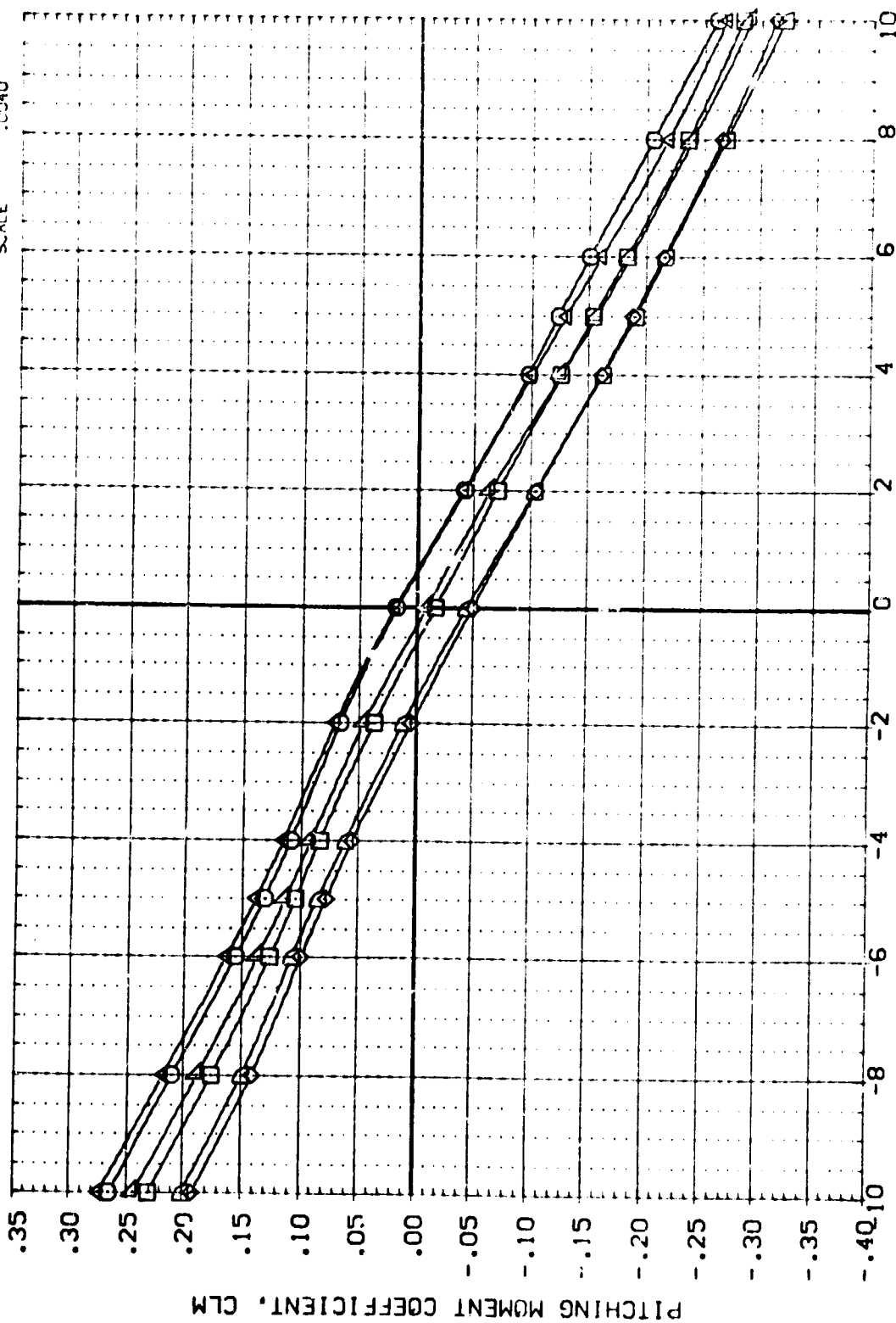
BREF 5.3130

XMRP 2.5450

YMRP .0000

ZMRP .0000

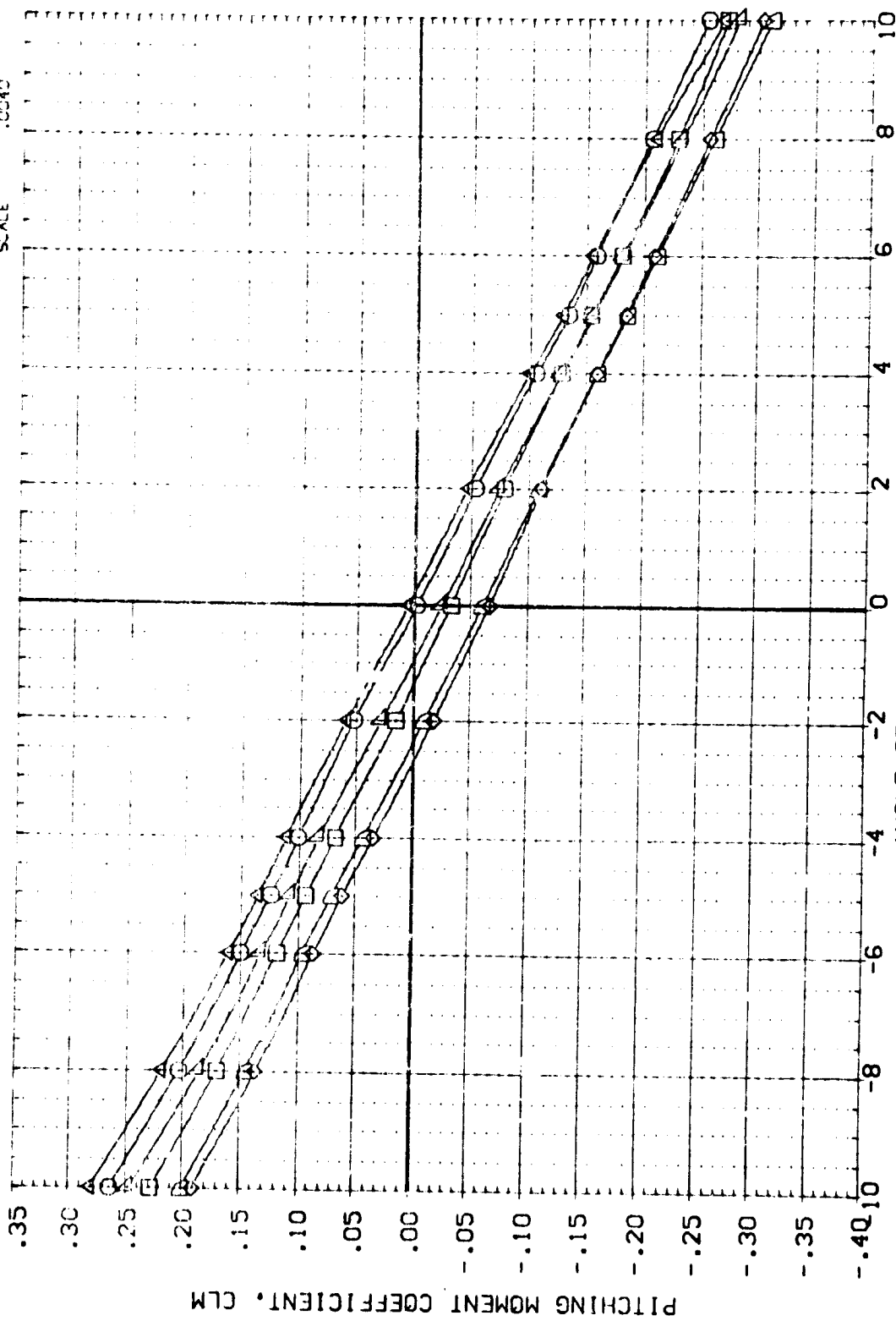
SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(B)MACH = .80

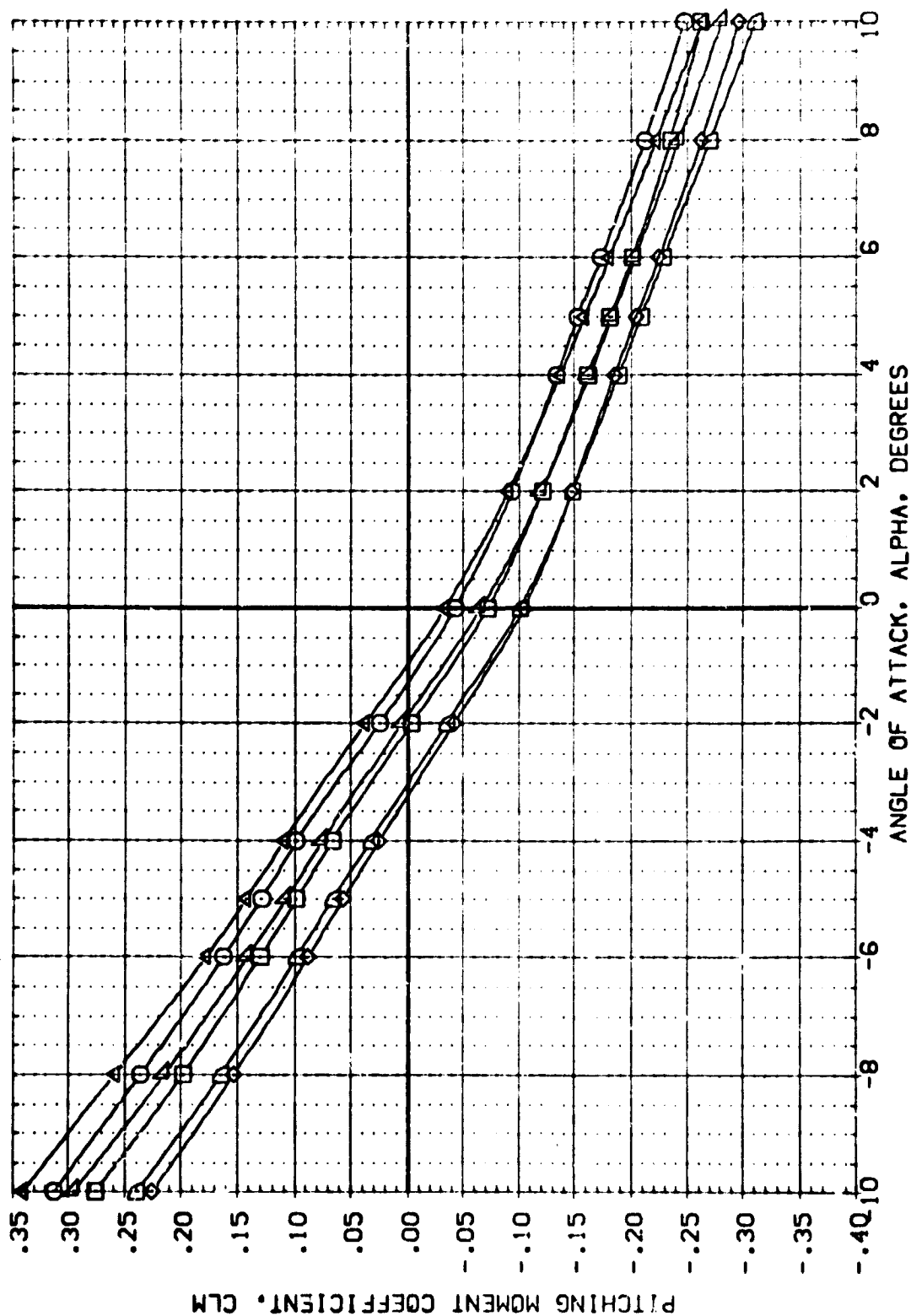
DATA SET SYMBO.	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.140	SREF 6 1980
(C83002)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.140	LREF 5 3130
(C83003)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.140	BREF 2 3130
(C83004)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.280	XMRP 2 5450
(C83005)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.280	YMRP .0000
(C83006)	MSFC 570 (A3IF) (03) (T9) (S3/2) (S3/2)	.000	-.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = .90

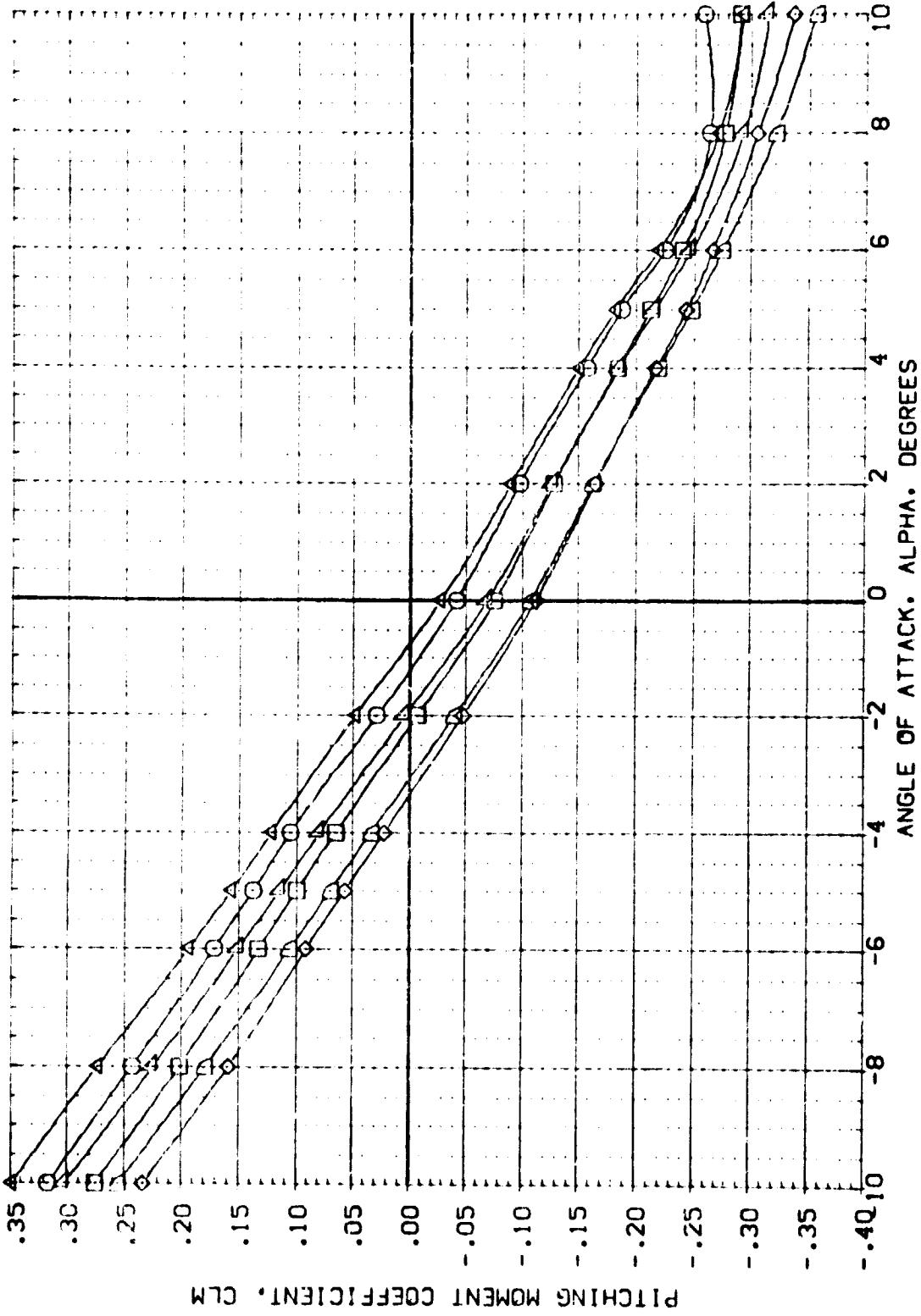
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 IN.
(C83002)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83003)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83004)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83005)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83006)	M5FC 570(I A3IF)(03)/(19)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = 1.05

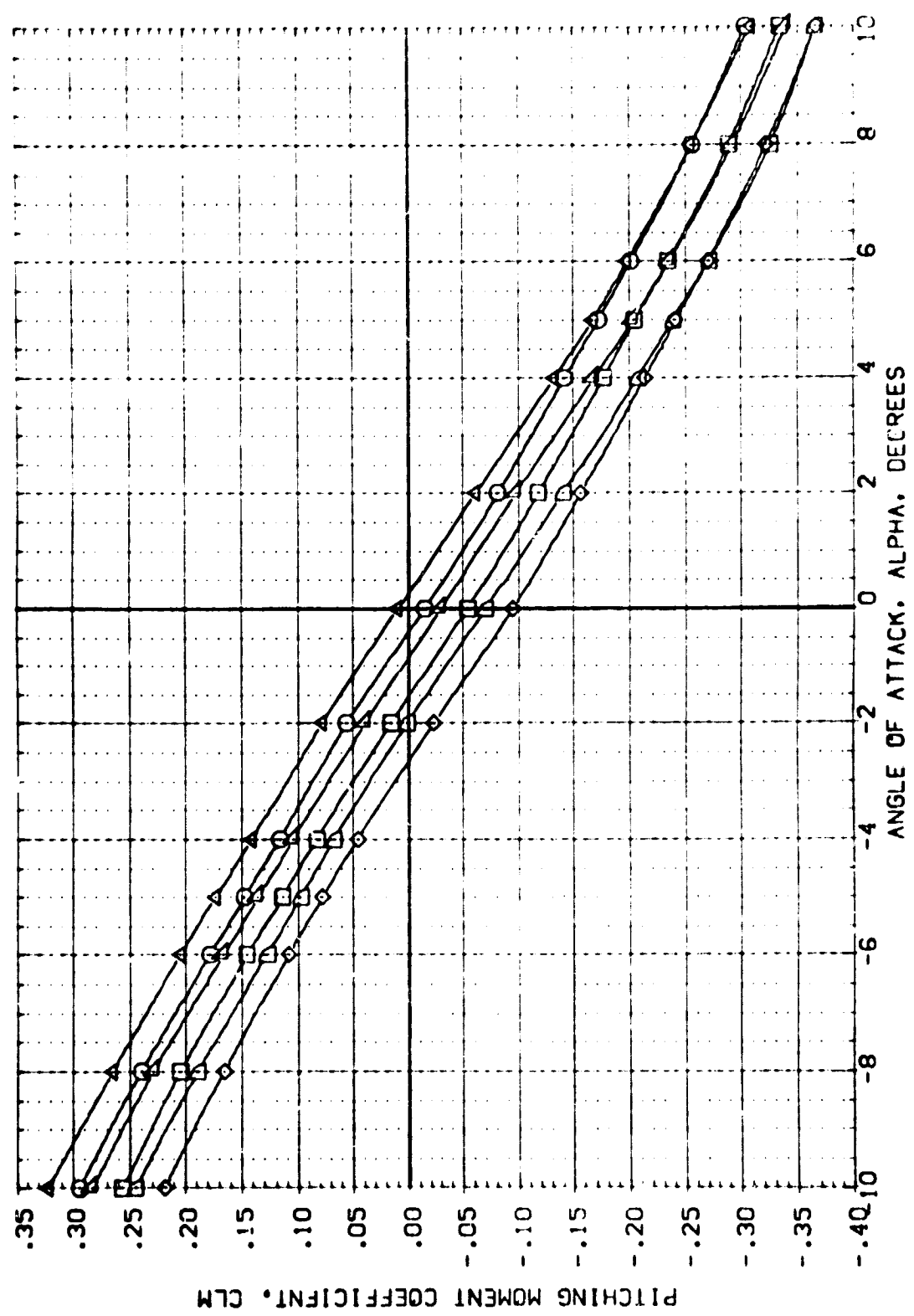
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.140	SREF 6.198C
(C83002)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.140	LREF 5.313C
(C83003)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.140	BREF 5.313C
(C83004)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.280	XMRP 2.348C
(C83005)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.280	YMRP .000C
(C83006)	MSFC 570((A31F))((03))((T9))((S3/2))	.000	.500	.280	ZMRP .000C
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

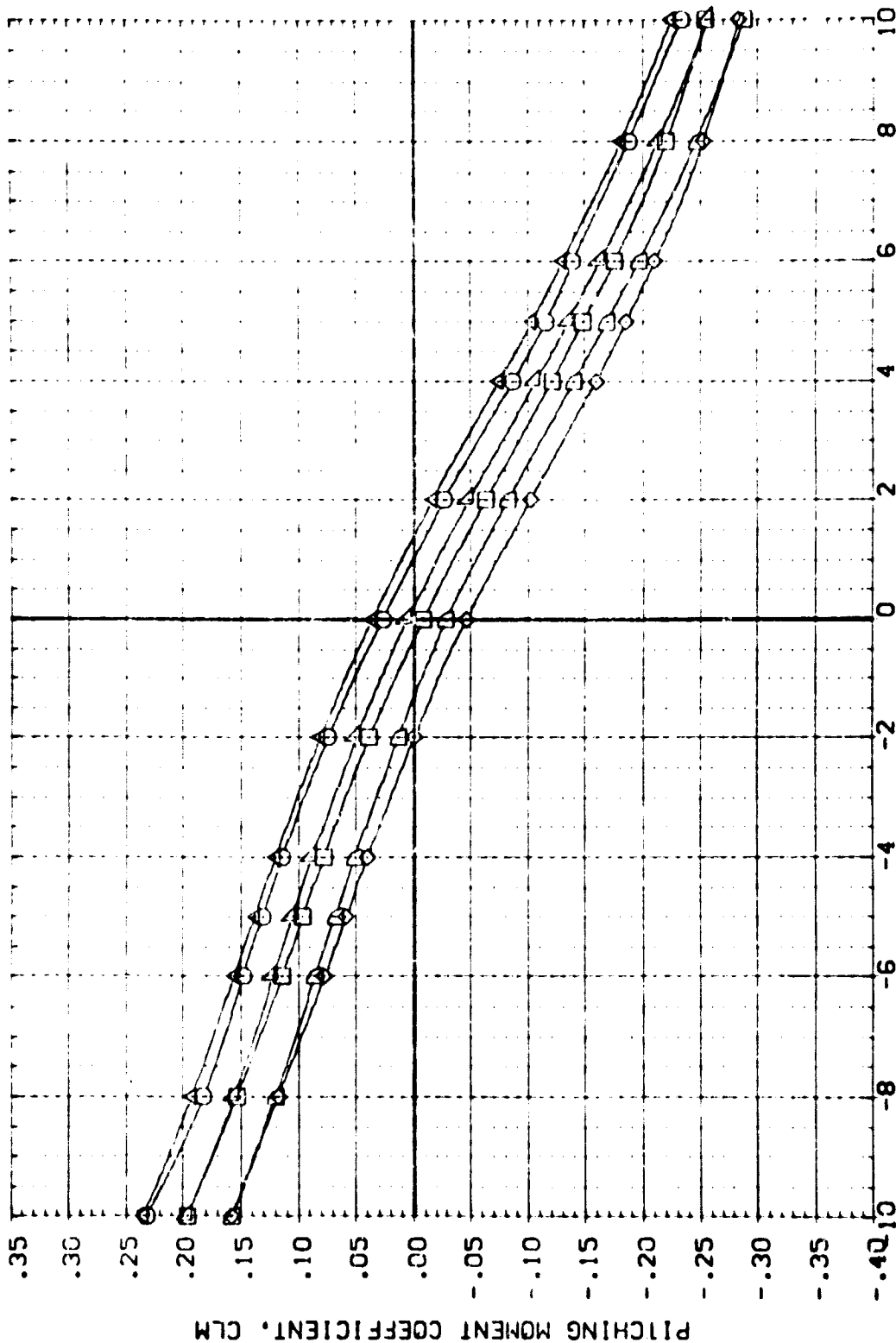
(M)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83002)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LBREF 5.3130
(C83003)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BRREF 5.3130
(C83004)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	X-REF 2.5450
(C83005)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	Y-REF .0000
(C83006)	MSFC 5701(A31F)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	Z-REF .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ 17
(C83002)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83003)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83005)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000
(C83006)	MSFC 570 (A3/F) (03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

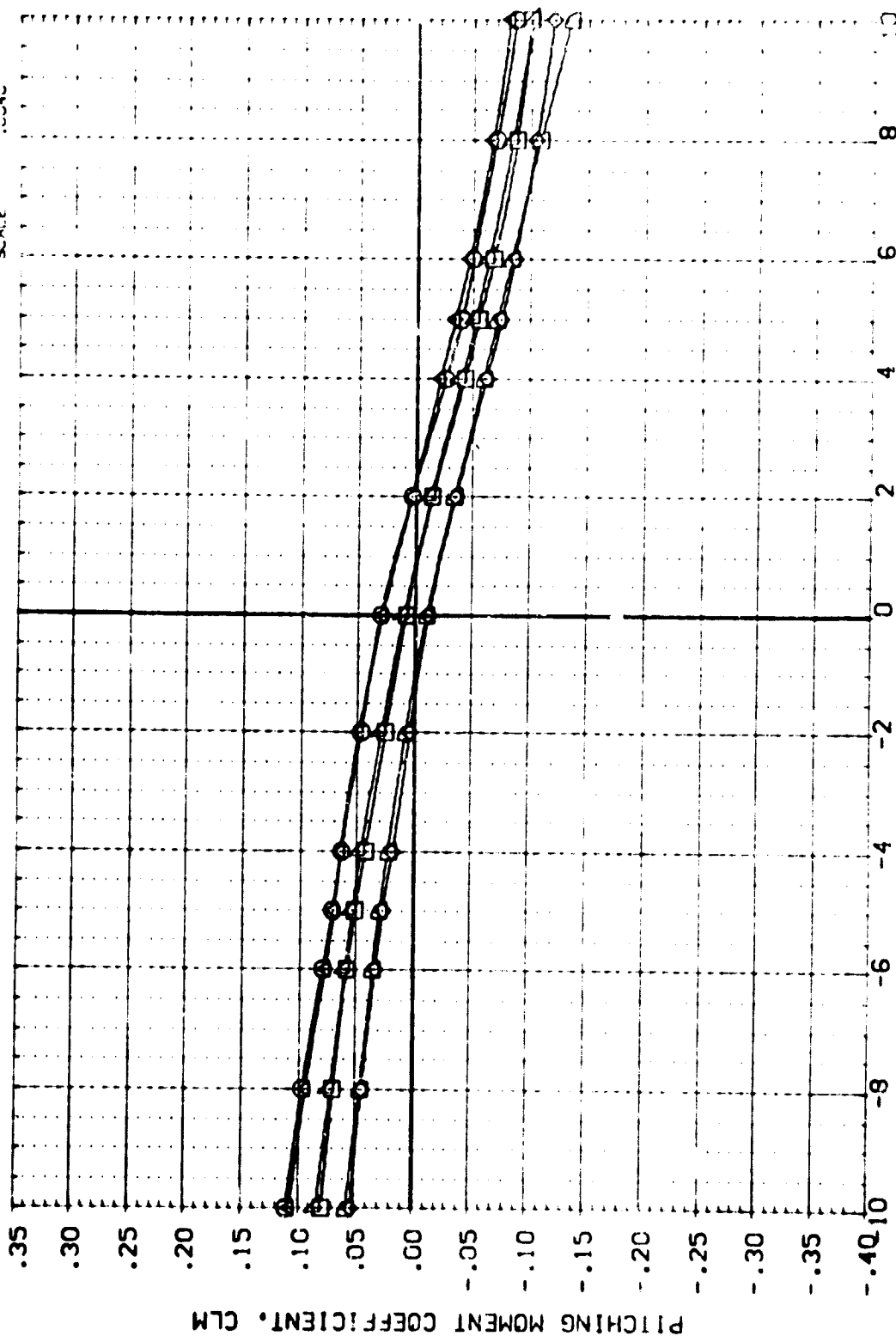
(G)MACH = 1.96

DATA SET SYMBOL

(C83001) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))
 (C83002) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))
 (C83003) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))
 (C83004) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))
 (C83005) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))
 (C83006) MSFC 570((A3)F((C3))((T9))((S3/2))((S3/2))

BETA .000
 ORBIT INC .500
 DELTA Z .140
 .000
 .500
 .140
 .000
 .500
 .260
 .000
 .500
 .260

REFERENCE INFORMATION
 SREF 6.1980
 LREF 3.130
 BRREF 3.130
 XMAP 54.00
 YMAP 0.000
 ZMAP 0.000
 SCALE 0.040

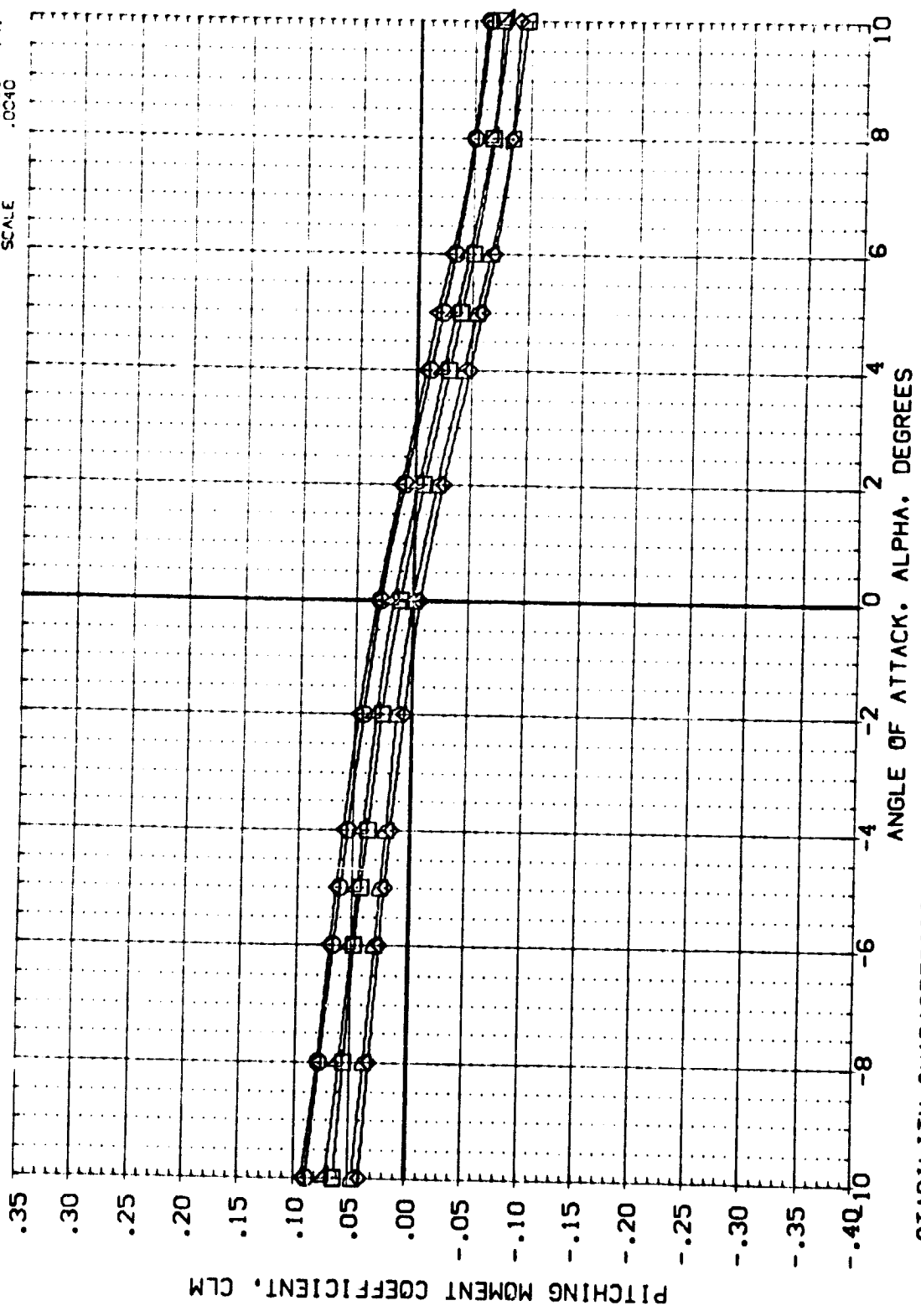


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = 2.99

C-2 O

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION	SO. IN
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF	6.1980
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF	5.3130
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF	5.3130
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	XMRP	2.5490
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	YMRP	.0000
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

()MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

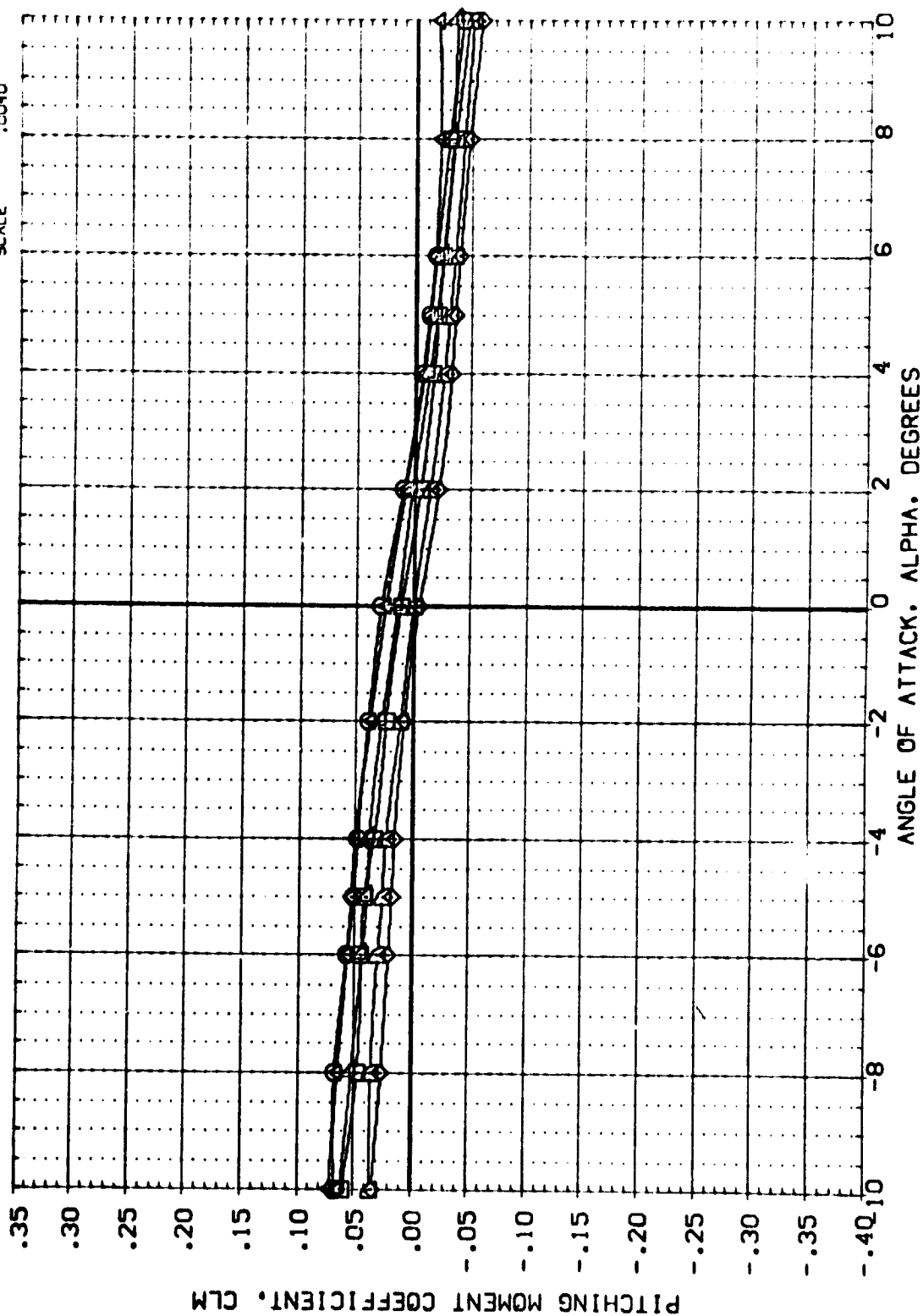
(C83001)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(C83002)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(C83003)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(C83004)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(C83005)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(C83006)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBITAL DELTA Z

.000	.500	.140
.000	.500	.140
.000	.500	.140
.000	.500	.280
.000	.500	.280
.000	.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5490	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

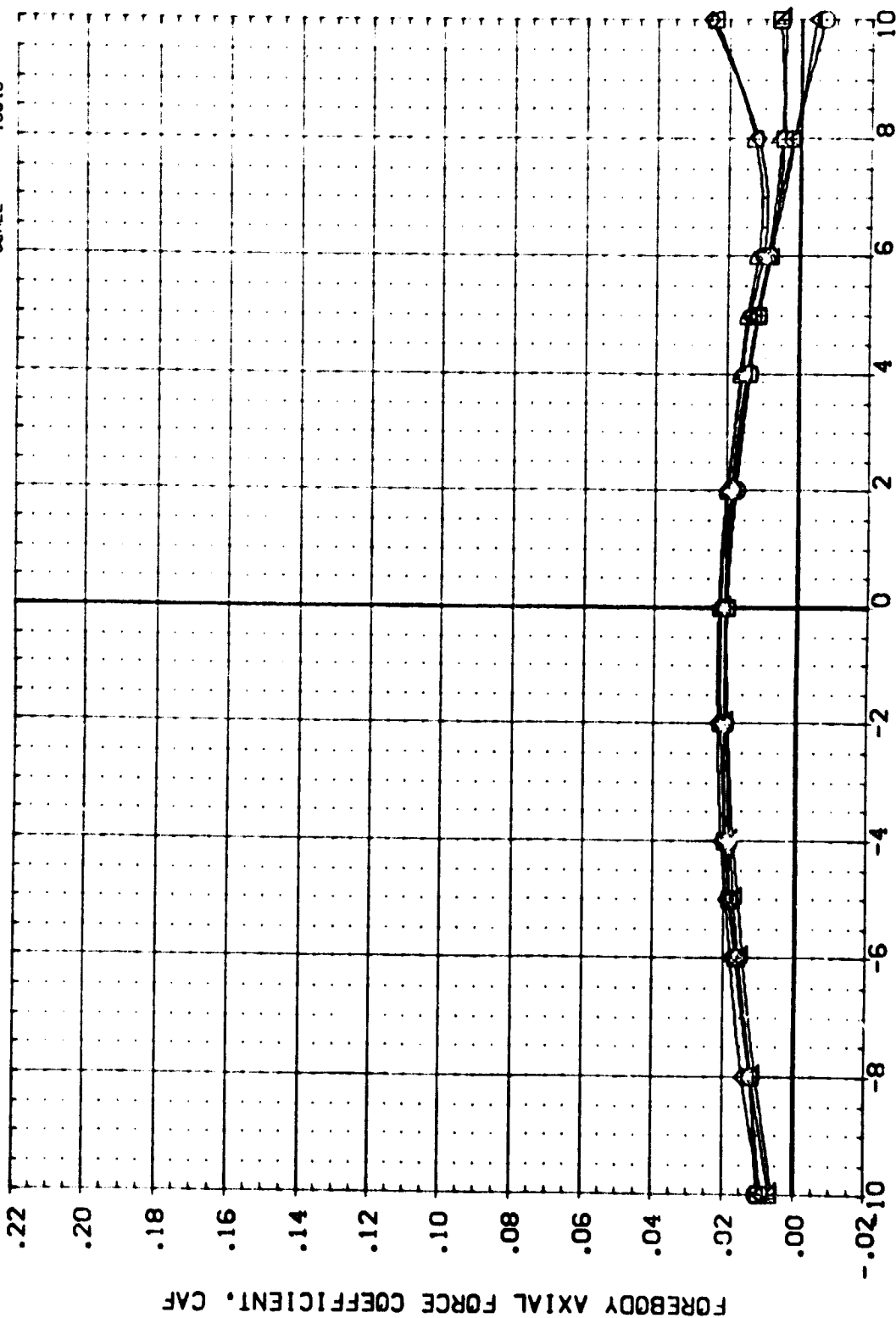


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = 4.96

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION	SO. IN
(C83001)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF	6.1980
(C83002)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF	5.3130
(C83003)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF	5.3130
(C83004)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP	2.5490
(C83005)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP	.0000
(C83006)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

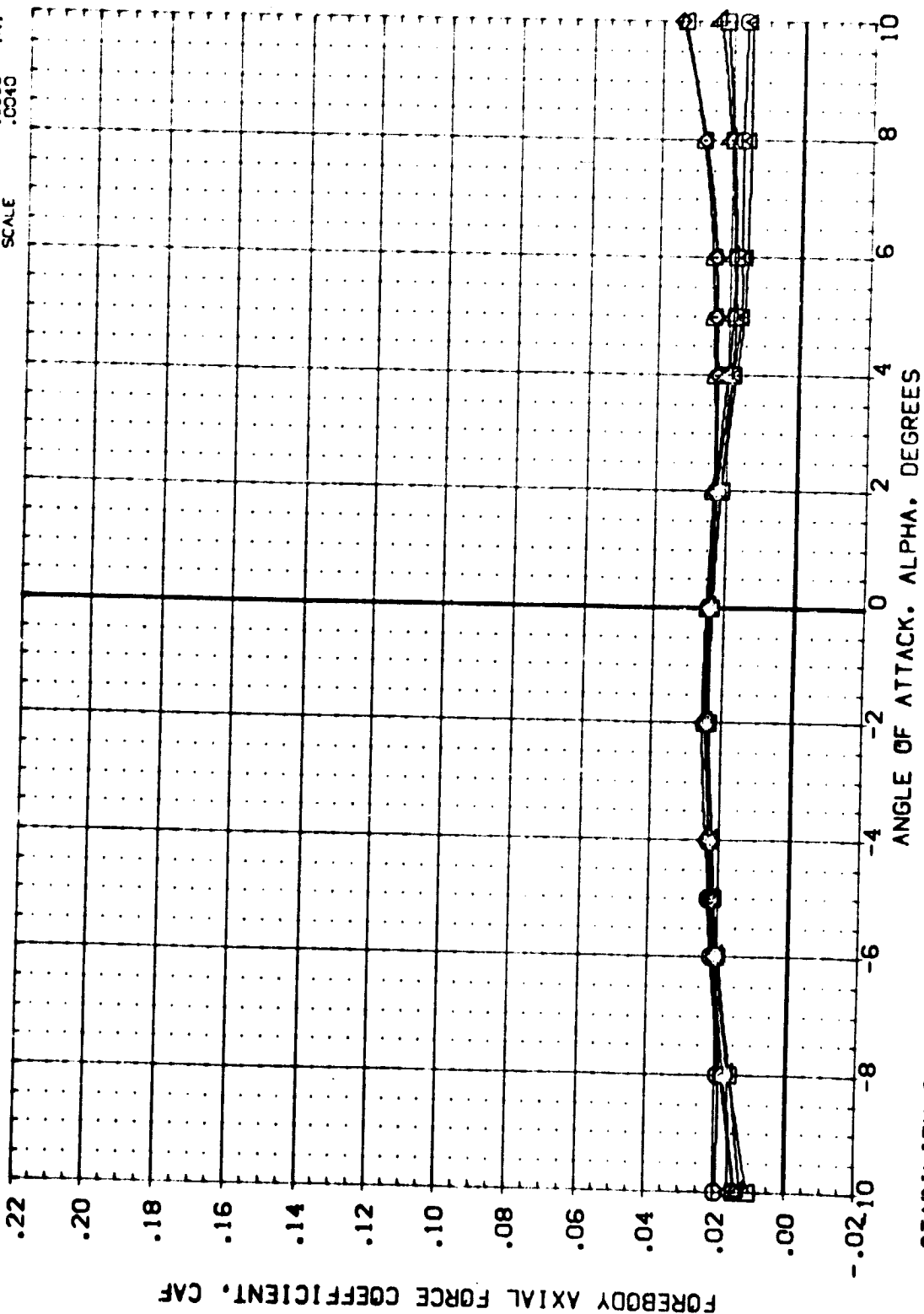
(C83001)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)
(C83002)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)
(C83003)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)
(C83004)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)
(C83005)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)
(C83006)	MSFC 570((A31F)(03)/((T9)/(S3/2))/(S3/2)

BETA ORBITAL DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO	IN
LREF	5.3130		
BREF	5.3130		
XMRP	2.5450		
YMRP	.0000		
ZMRP	.0000		
SCALE	.0010		



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(S)MACH = .80

DATA SET SYMBOL CONFIGURATION DESCRIPTION

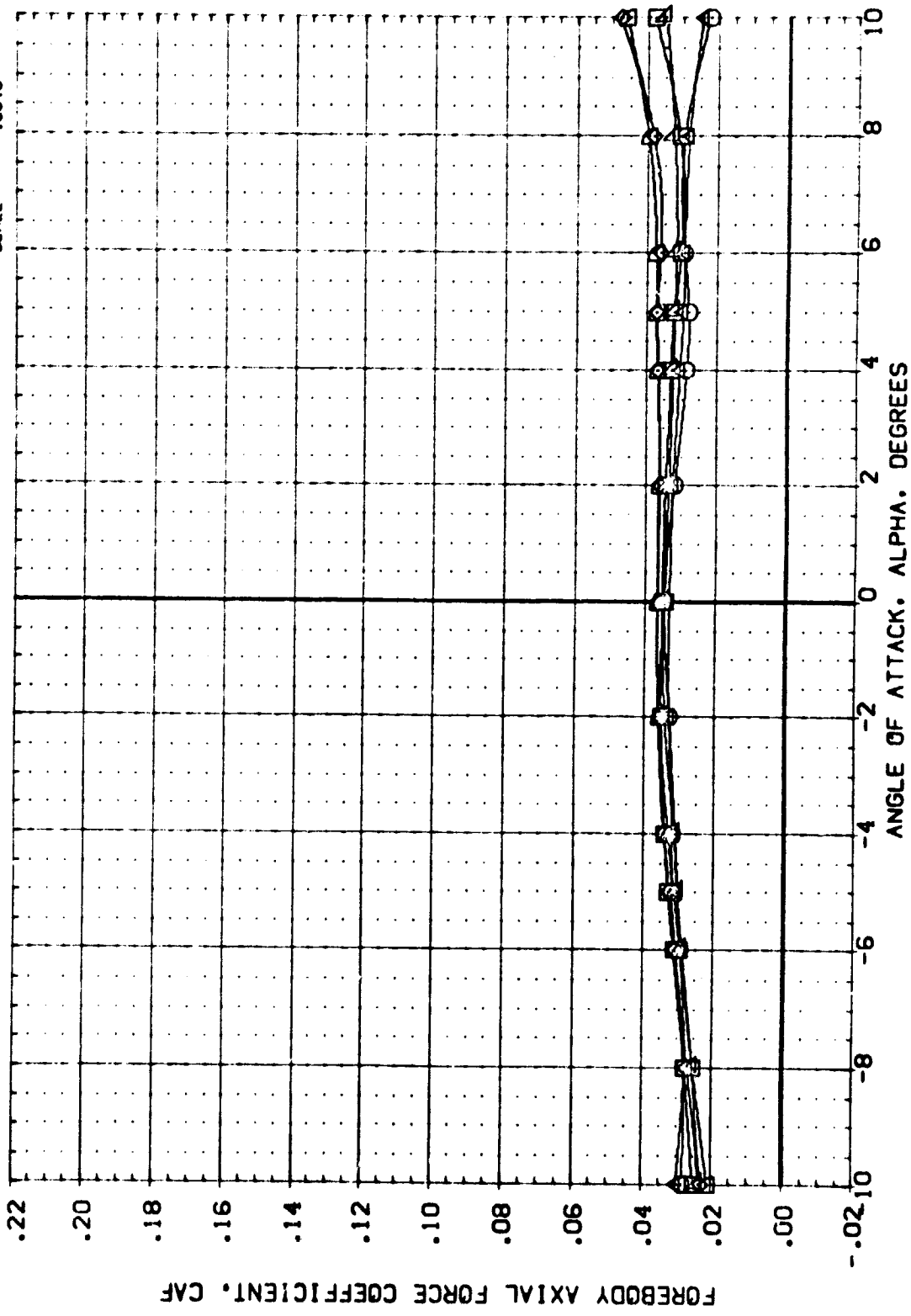
(C83001)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83002)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83003)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83004)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83005)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83006)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBITING DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

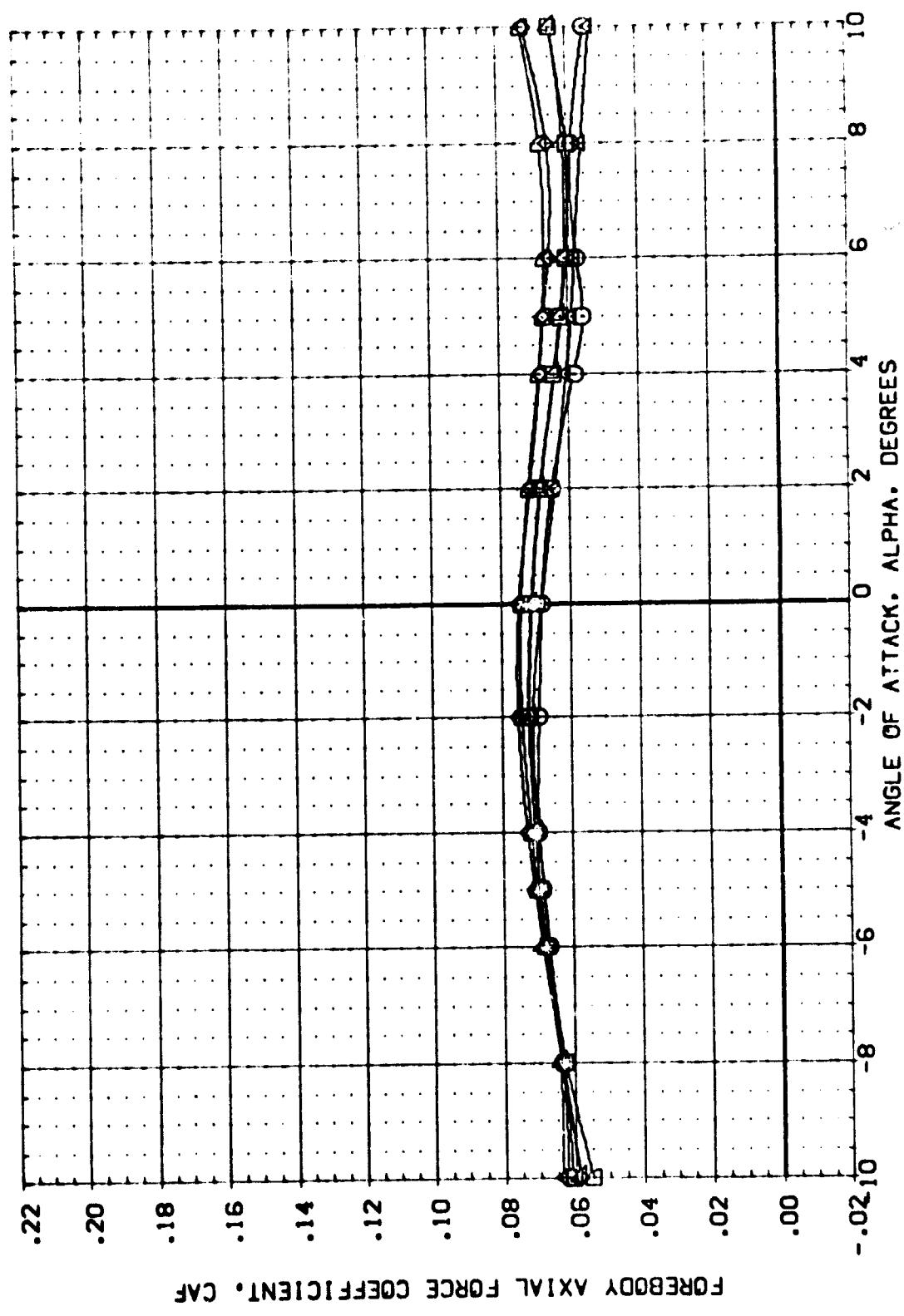
SREF	6.1980	50. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5490	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = .90

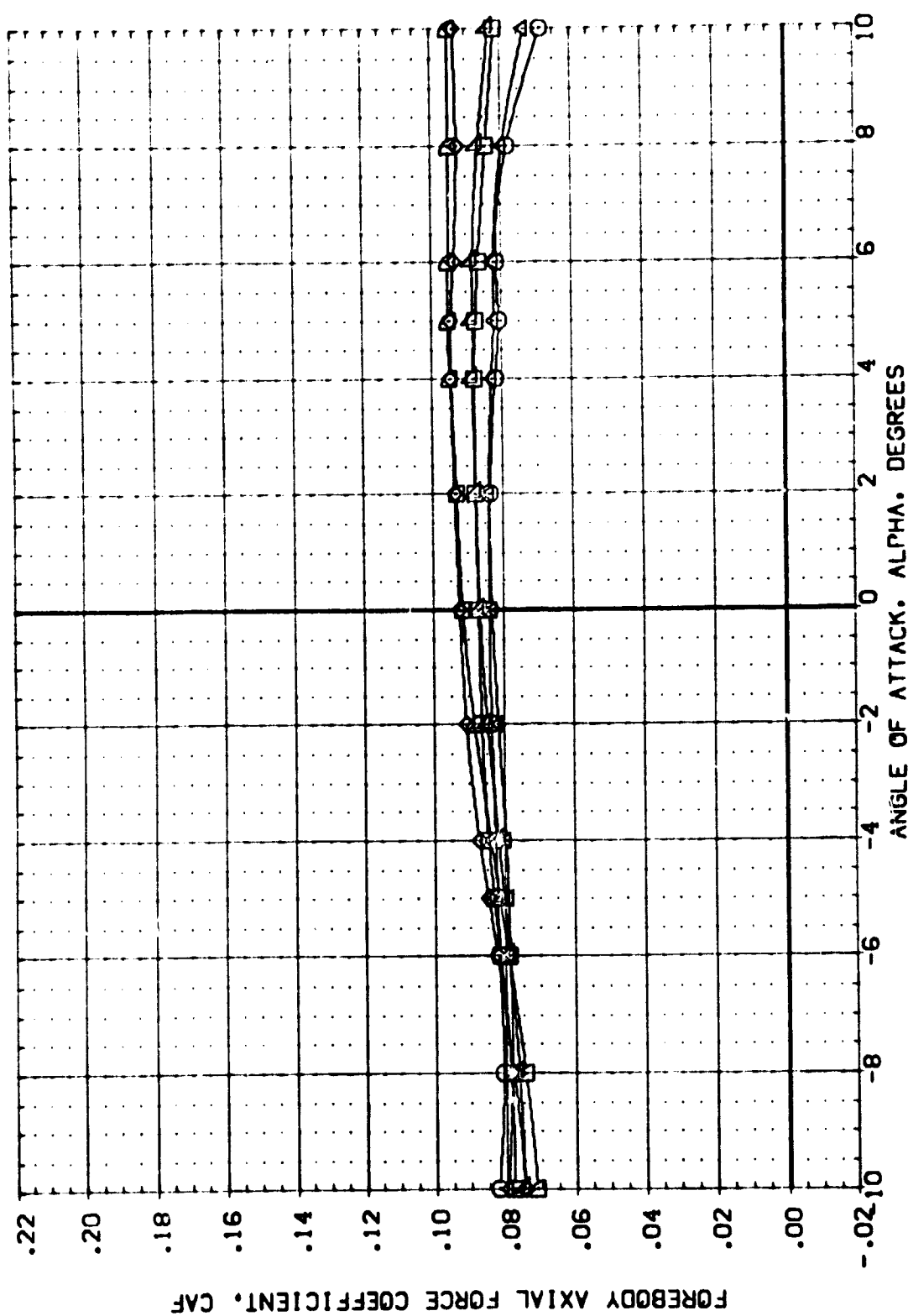
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION	SO IN
(C83001)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF	6.1980
(C83002)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF	5.3130
(C83003)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF	5.3130
(C83004)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP	2.5450
(C83005)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP	.0000
(C83006)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE	.0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83002)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2
(C83005)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83006)	M5FC 570(I A3IF)(O3)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0340



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(E)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

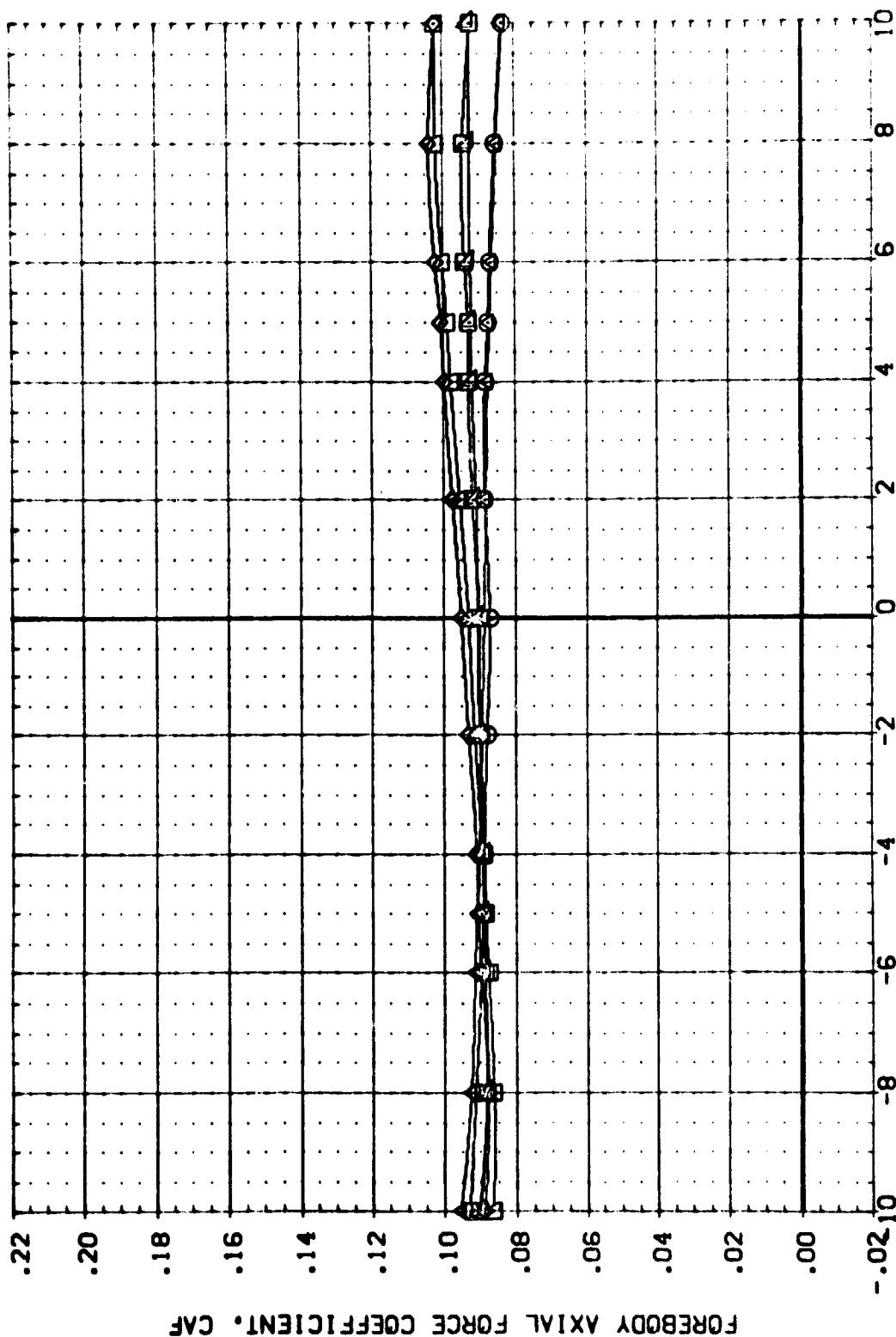
(C83001)	M5FC	570((A31F)(03)/(T9)/(S3/2)/(S3/2))
(C83002)	M5FC	570((A31F)(03)/(T9)/(S3/2)/(S3/2))
(C83003)	M5FC	570((A31F)(03)/(T9)/(S3/2)/(S3/2))
(C83004)	M5FC	570((A31F)(03)/(T9)/(S3/2)/(S3/2))
(C83005)	M5FC	570((A31F)(03)/(T9)/(S3/2)/(S3/2))

BETA ORBIT INC DELTA Z

.000	-.500	.140
.000	-.500	.140
.000	1.500	.140
.000	-.500	.280
.000	-.500	.280
.000	1.500	.280

REFERENCE INFORMATION

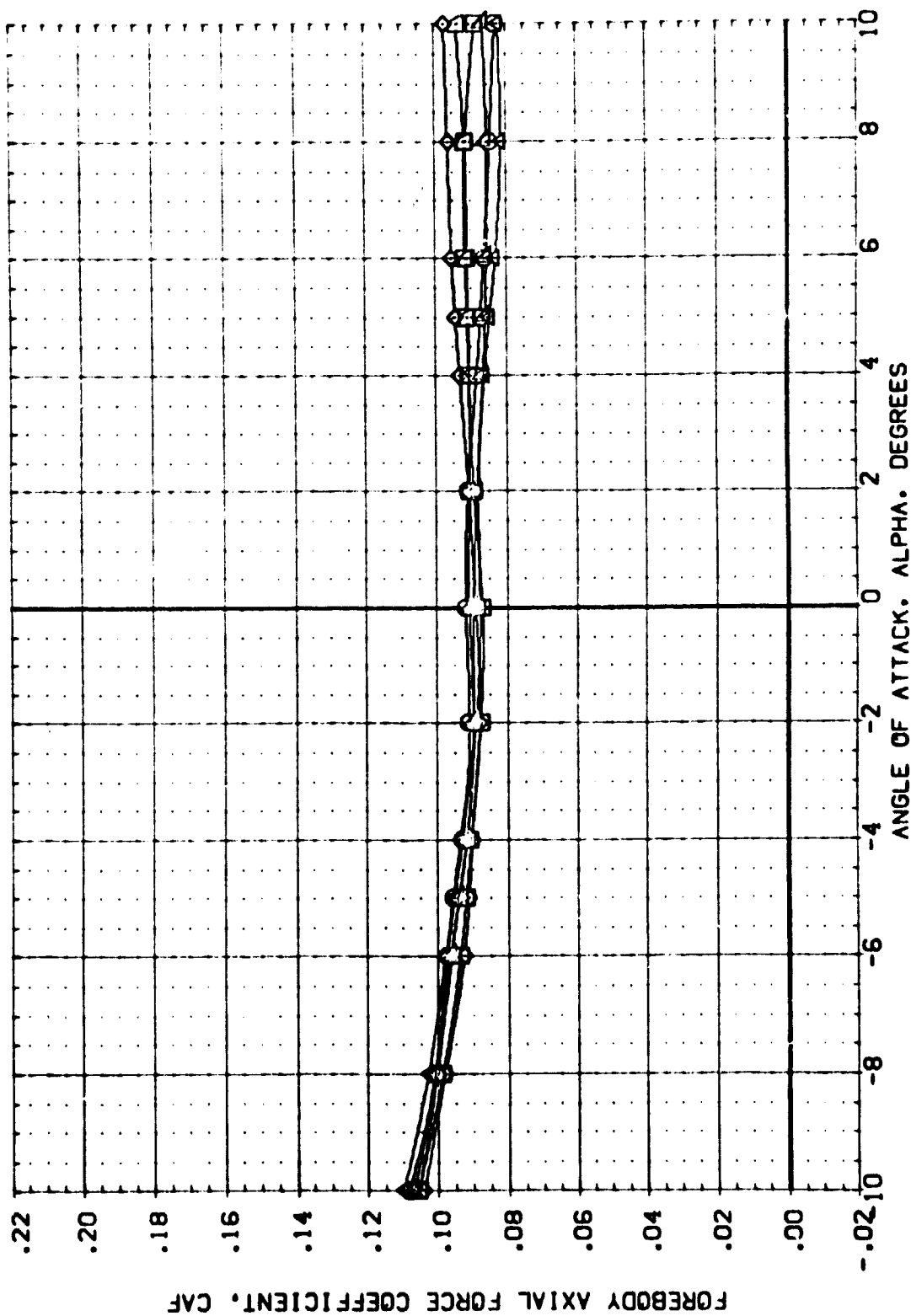
SREF	6.1980	SO	IN
LREF	5.3130	IN	
BREF	5.3130	IN	
YMRP	2.5480	IN	
YMRP	.0000	IN	
YMRP	.0000	IN	
SCALE	.0040		



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = 1.46

DATA SET SYMB.	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	-.500	.140	SREF 5.1980
(C83002)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83005)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	.500	.280	YMRP .0000
(C83006)	M5FC 570((A31F)(03))((T9)/(S3/2))/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(GOMACH = 1.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83001) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

(C83002) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

(C83003) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

(C83004) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

(C83005) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

(C83006) MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .260

.000 .500 .260

.000 1.500 .260

REFERENCE INFORMATION

SREF 5.1980 SO: IN

LREF 5.3130 7.7

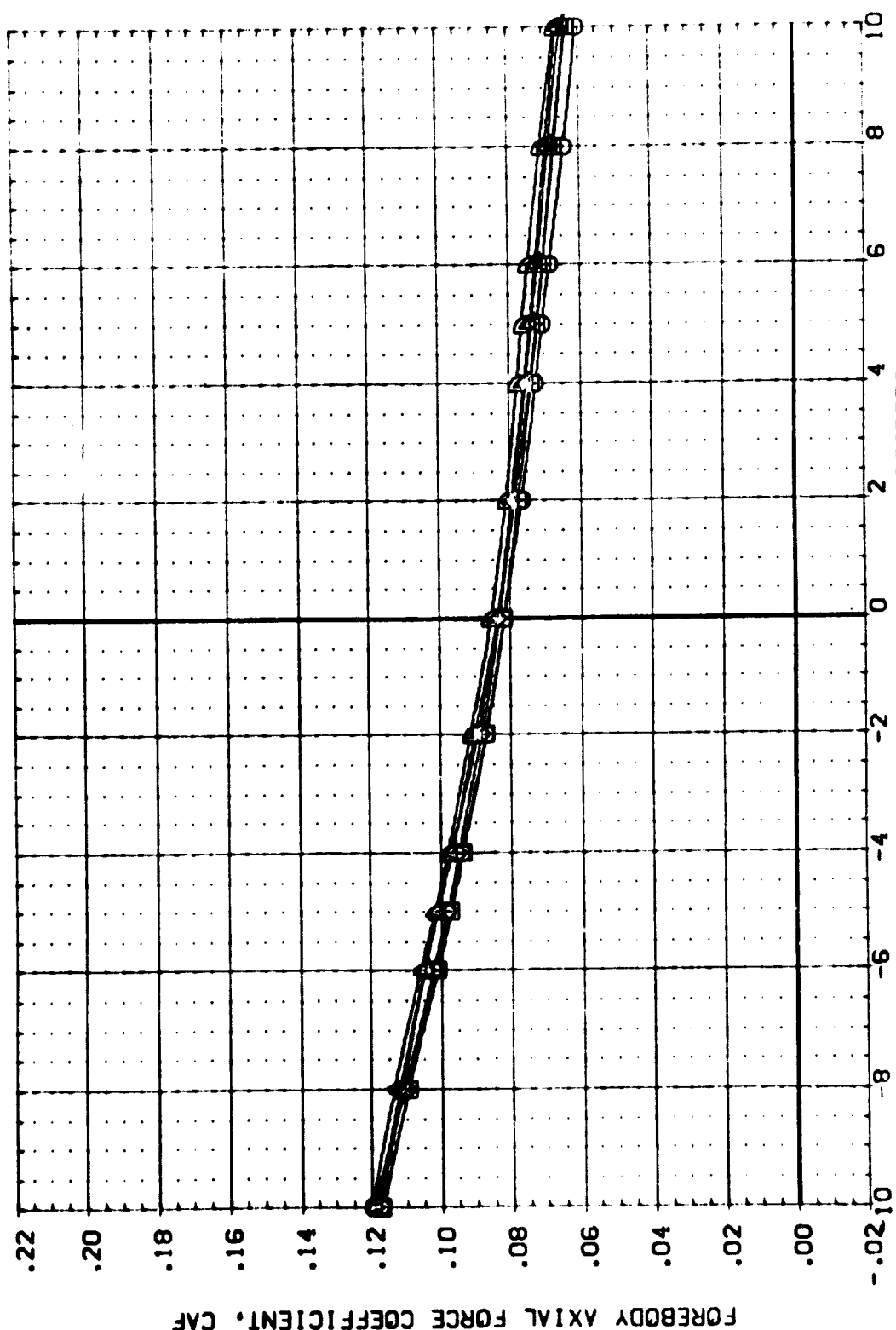
BREF 5.3130 7.7

XMRP 2.5450 7.7

YMRP .0000 7.7

ZMRP .0000 7.7

SCALE .0040 7.7



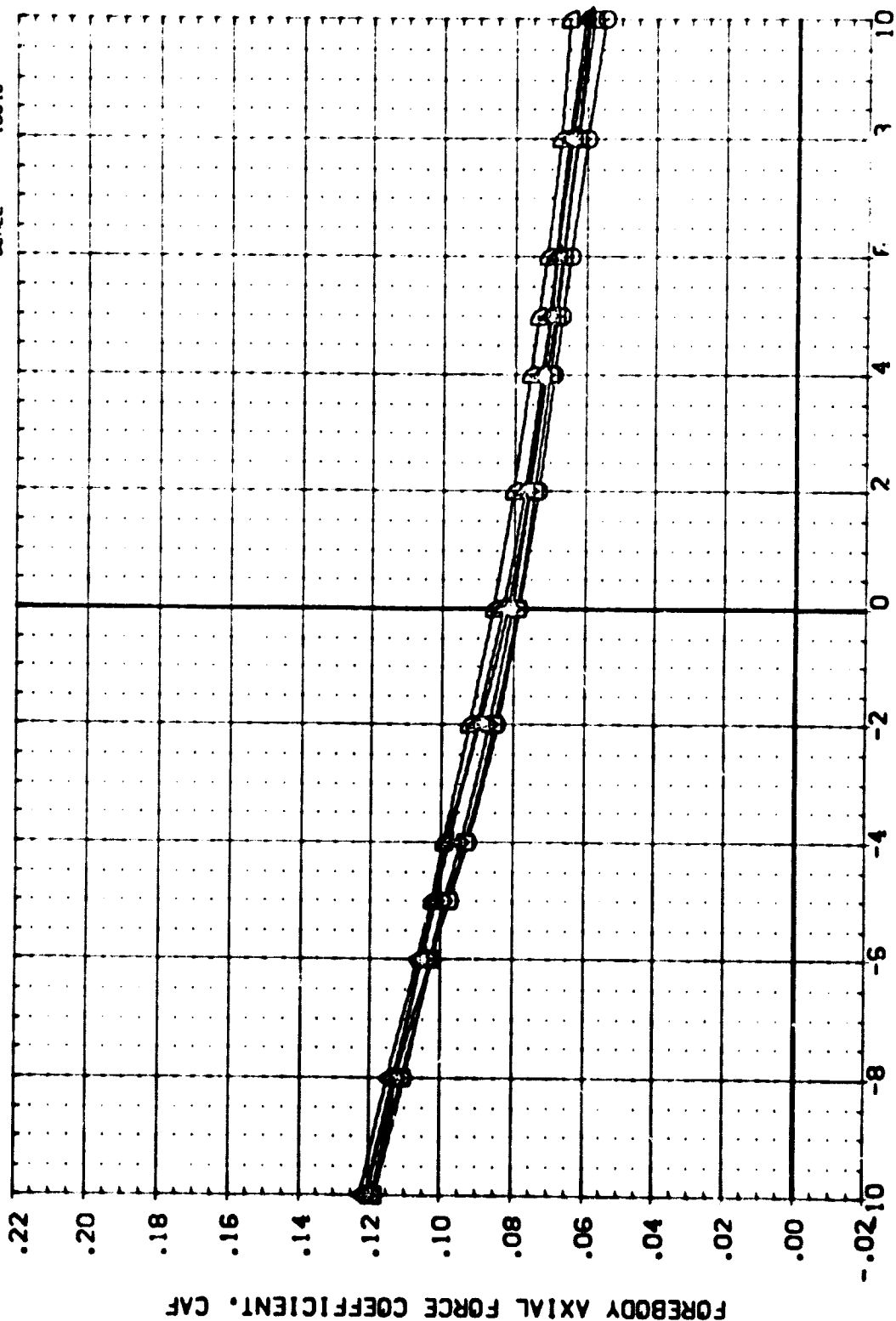
FOREBODY AXIAL FORCE COEFFICIENT, CAF

ANGLE OF ATTACK, ALPHA, DEGREES

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(M)MACH = 2.99

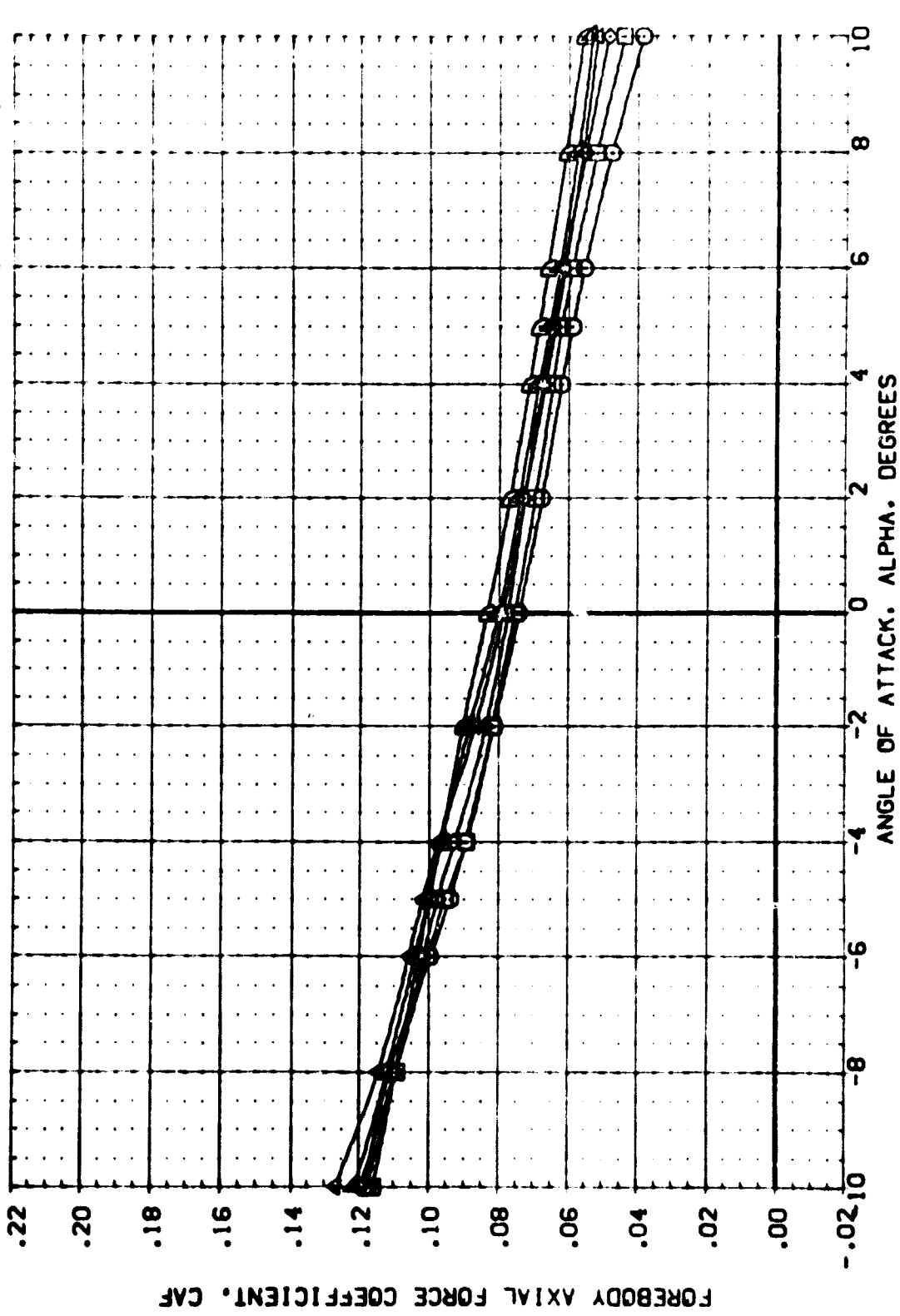
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	VMRP .0000 IN.
(C83036)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(1)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C00001)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ.
(C00002)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 N.
(C00003)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 N.
(C00004)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.260	XREF 2.5490 N.
(C00005)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.260	YREF .0000 N.
(C00006)	MFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.260	ZREF .0000 N.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

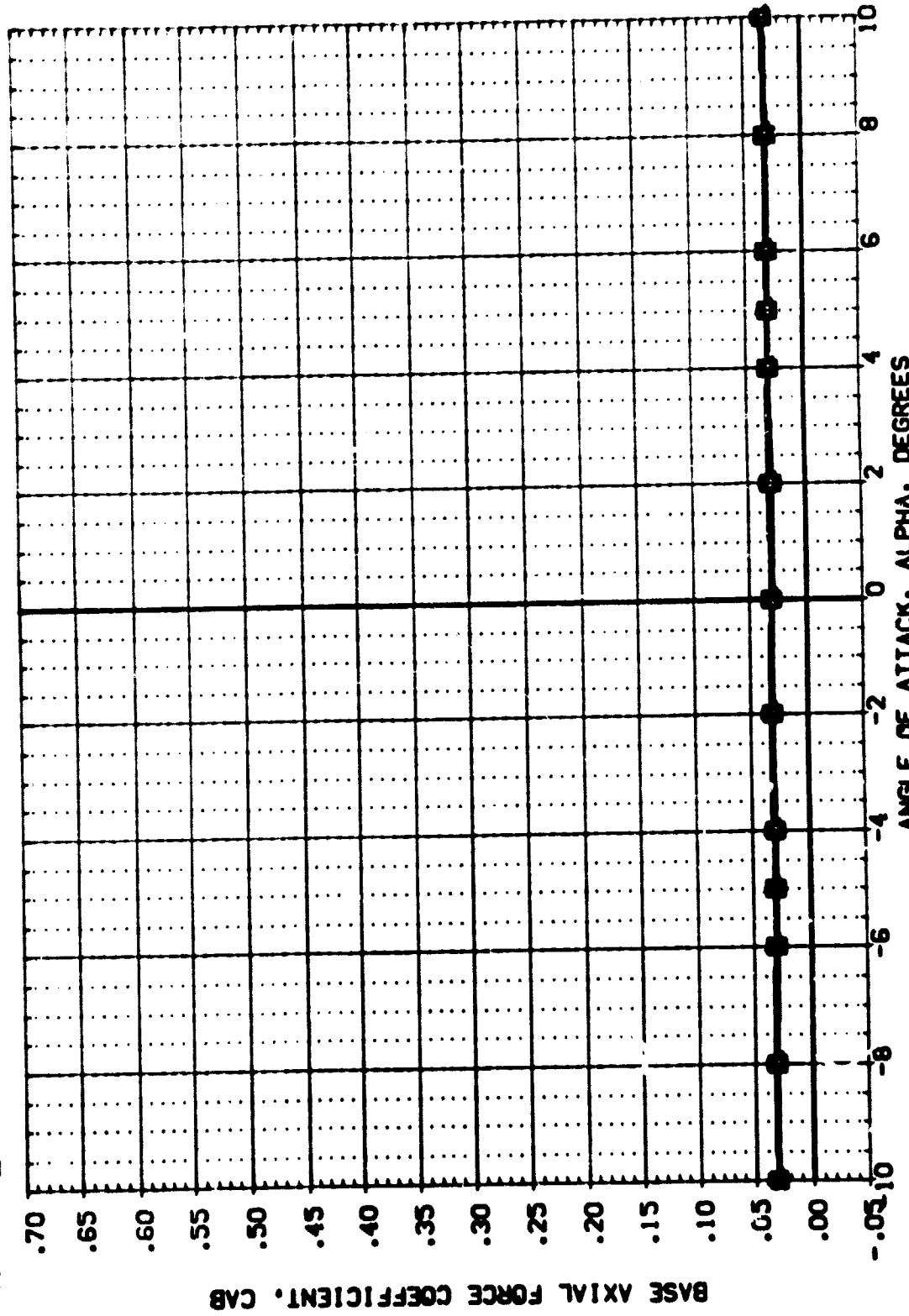
(J)MACH = 4.96

REFERENCE INFORMATION
 SREF 1.980 SQ. IN
 LREF 2.312
 XREF 2.312
 YREF 2.5450
 ZREF .0000
 SCALE .0040

BETA ORBITING DELTA Z
 .000 .500
 .000 .500
 .000 .500
 .000 .500
 .000 .500
 .000 .500

CONFIGURATION DESCRIPTION
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
 MFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

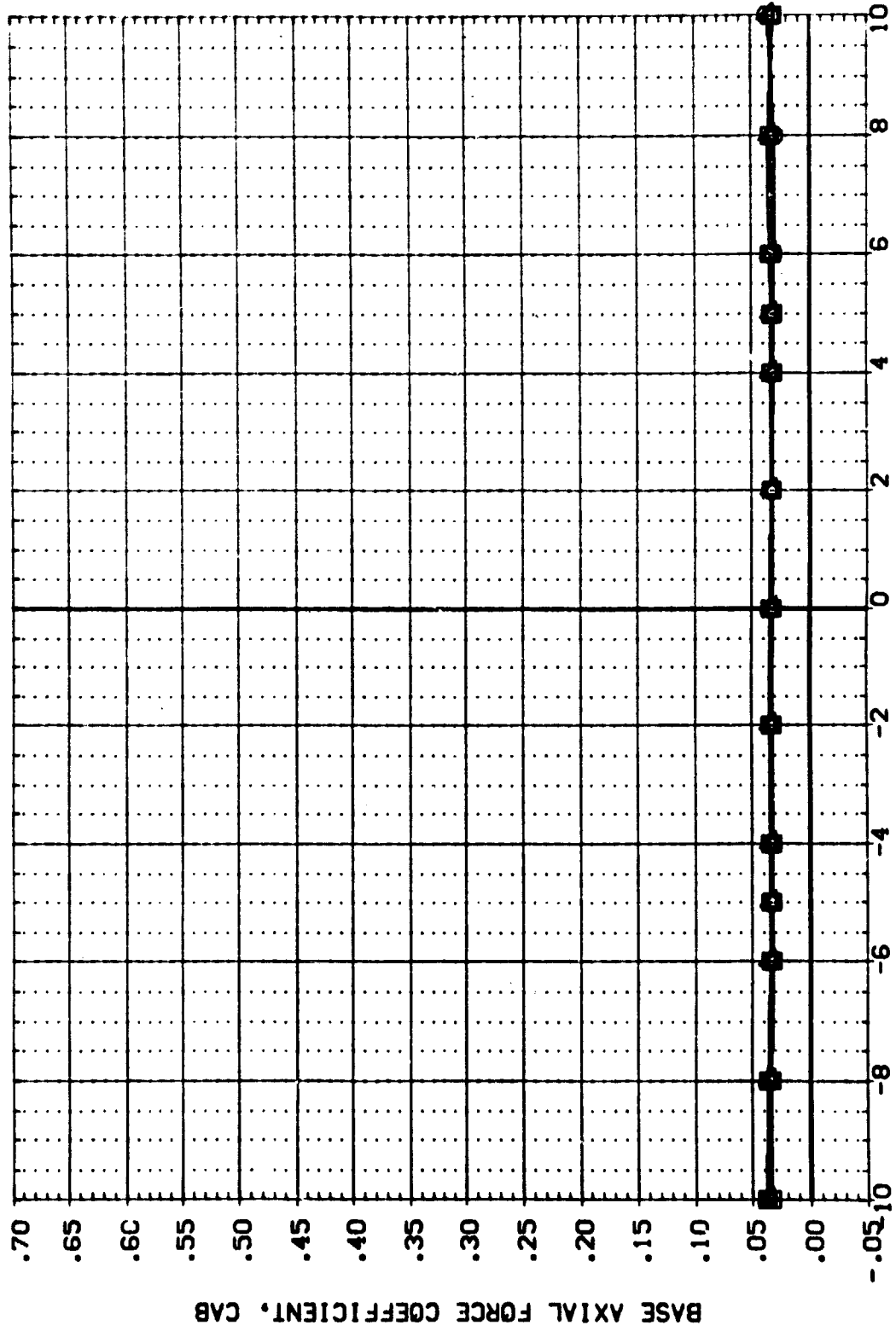
DATA SET SYMBOL
 00001
 00002
 00003
 00004
 00005
 00006



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(A)MACH = 60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83002)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5450 IN.
(C83005)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	ZMRP .0000 IN.
(C83006)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040

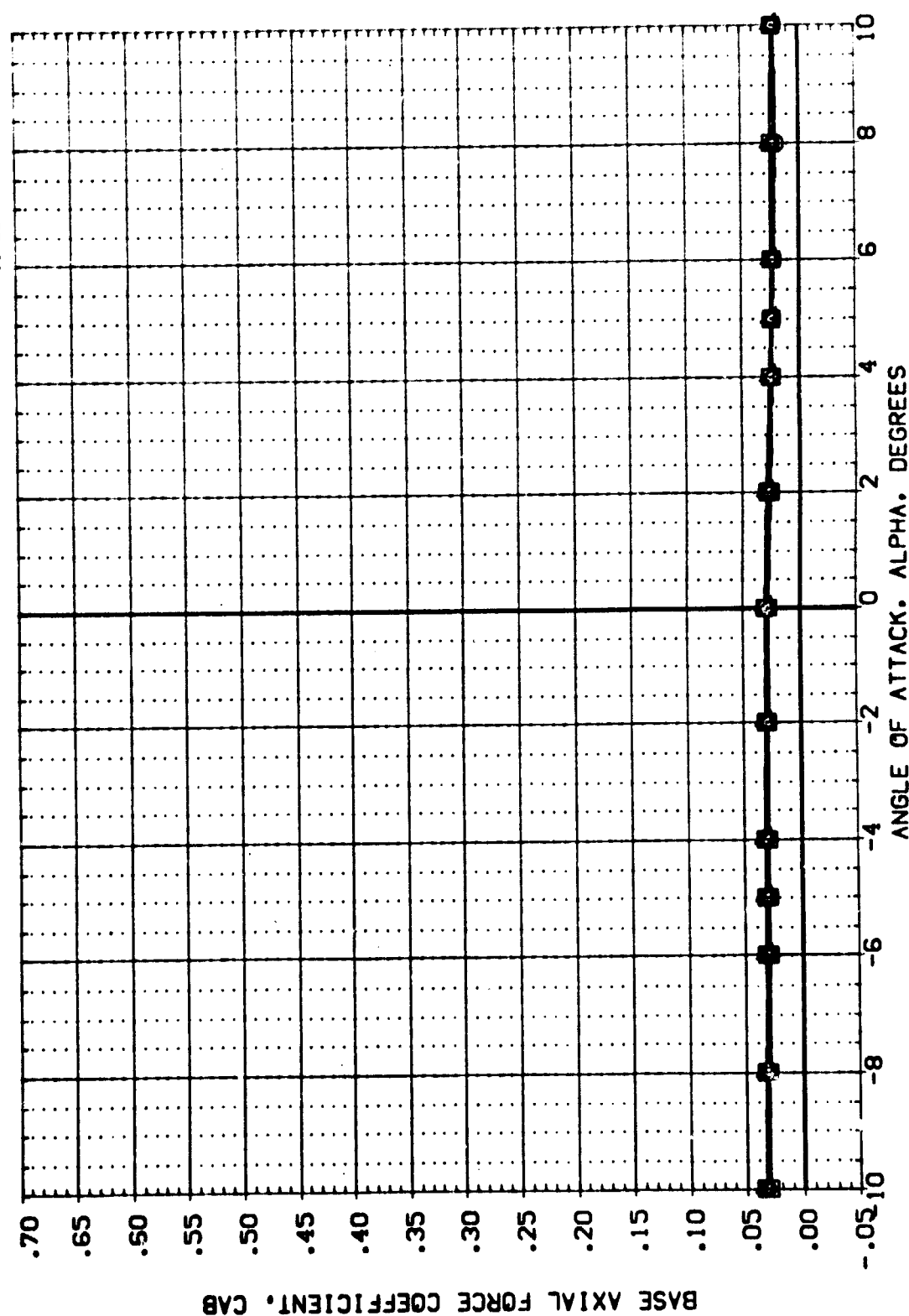


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = .90

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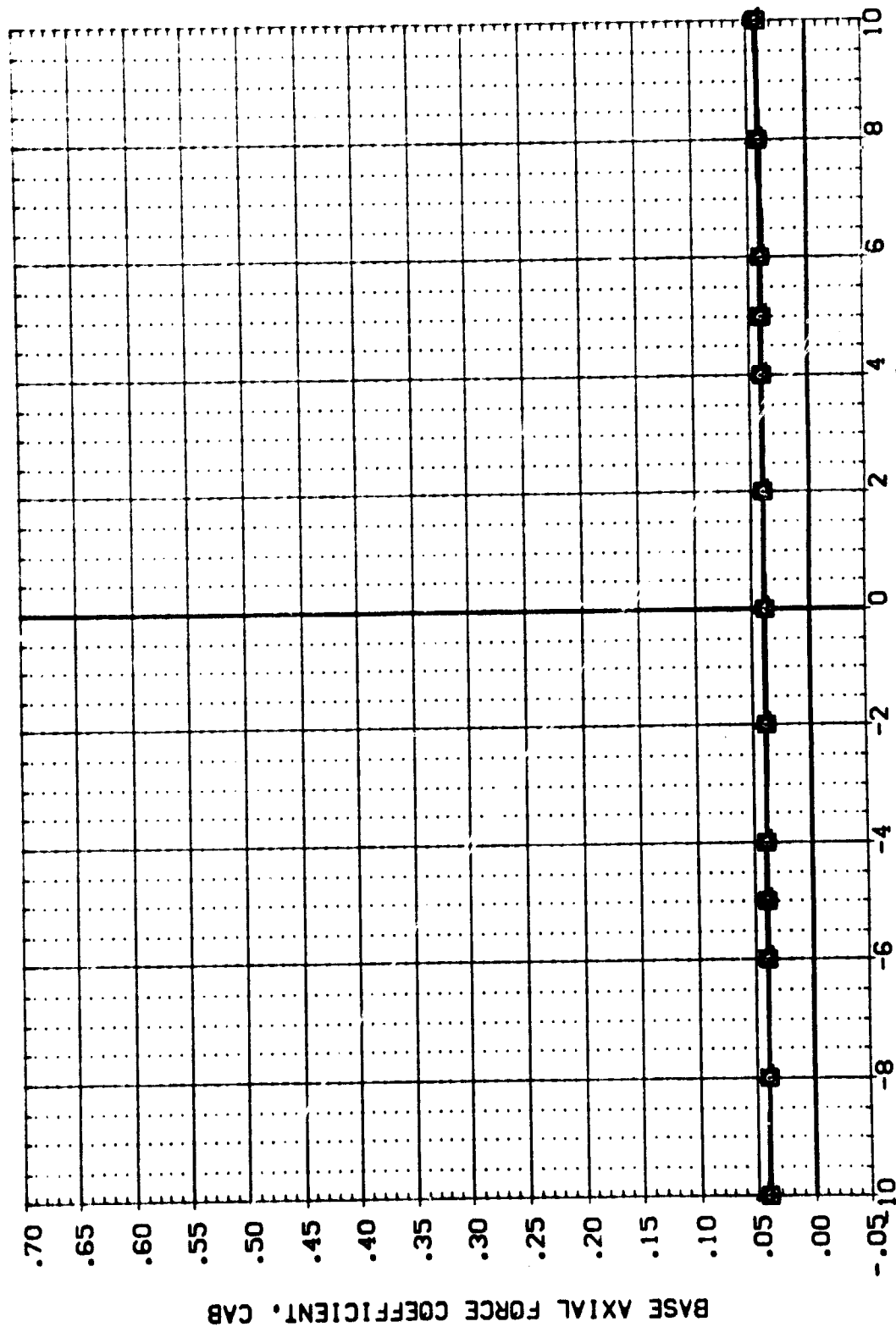
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	REF 5.3130 IN.
(C83003)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 570(IAGIF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(O)MACH = 1.05

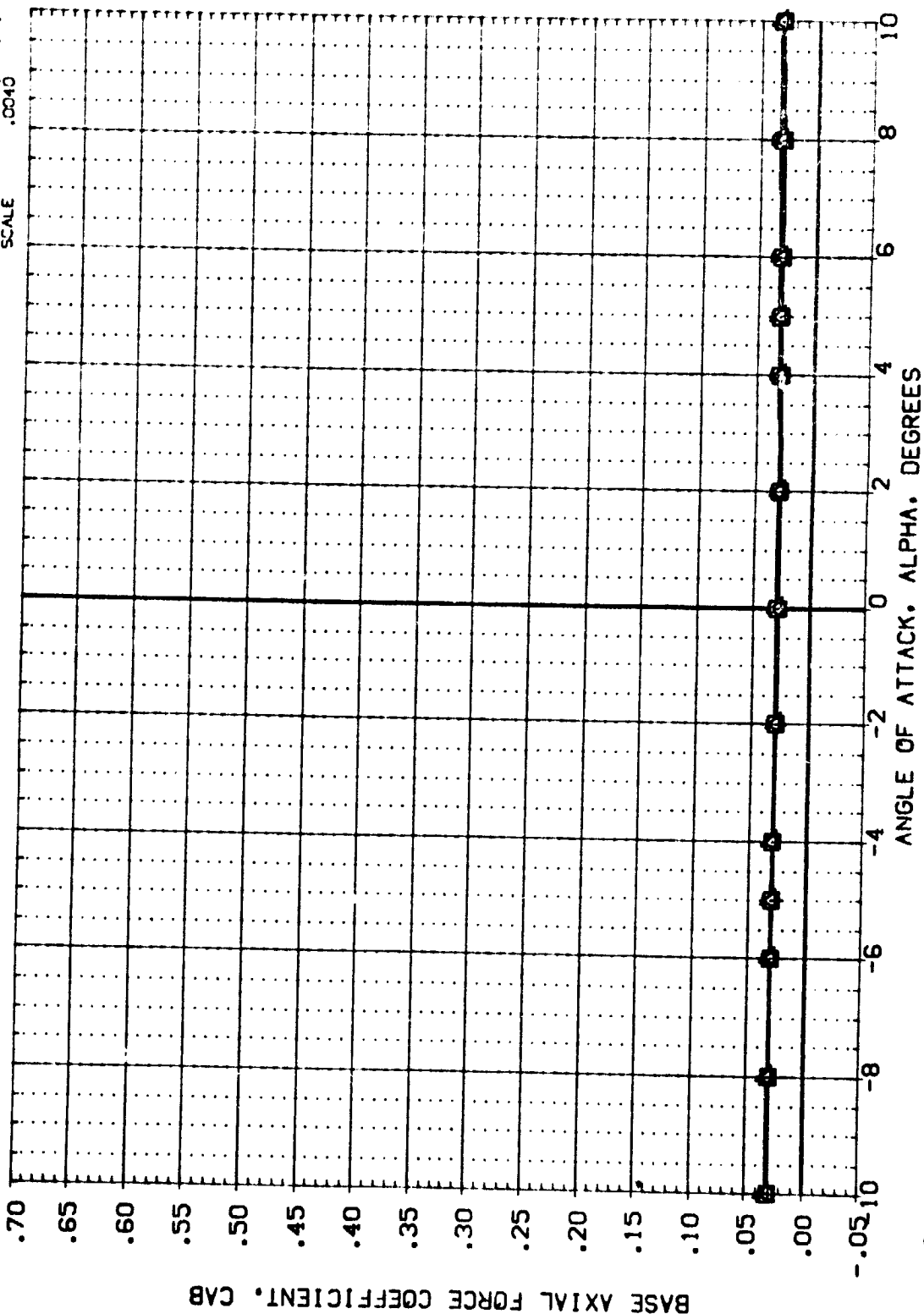
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION	SG. IN
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF	6.1980
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF	5.3130
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF	5.3130
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP	2.5490
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP	.0000
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(E)MACH = 1.25

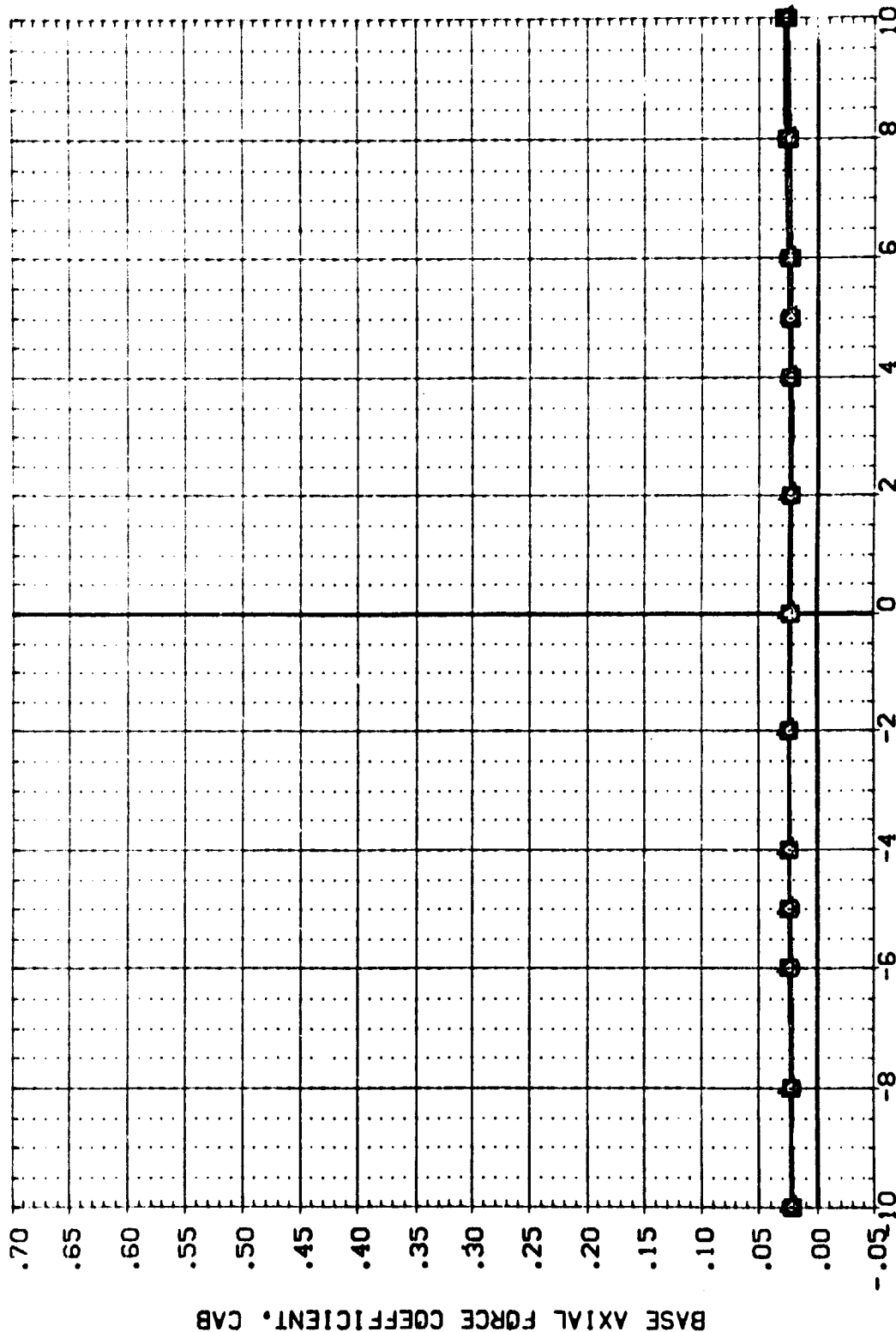
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1960 SQ. IN
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5480 IN
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(F)MACH = 1.46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	YMRP .0000
(C83006)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(G)MACH = 1.96

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

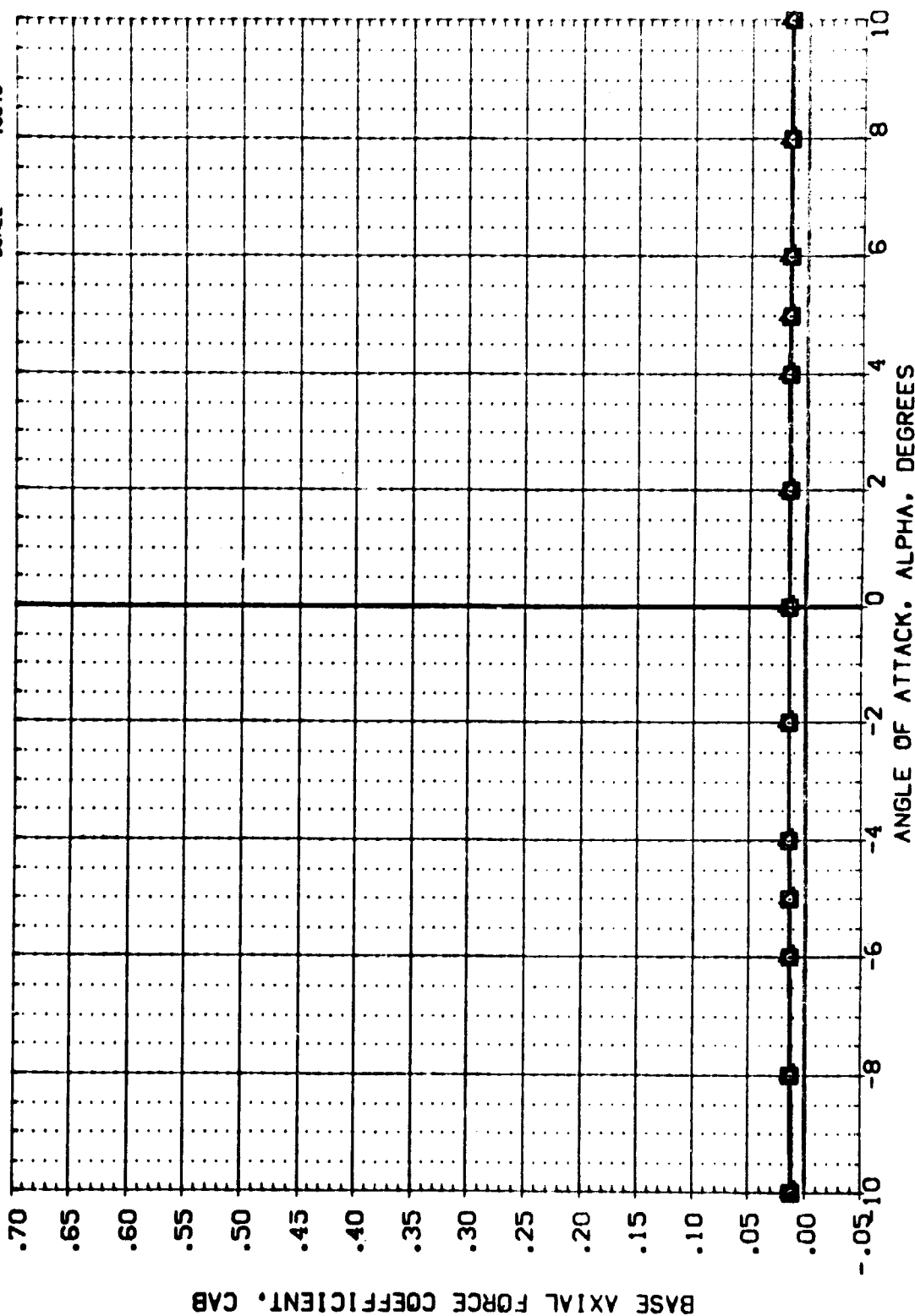
(C83001)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)
(C83002)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)
(C83003)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)
(C83004)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)
(C83005)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)

BETA ORBITING DELTA Z

.000	-.500	.140
.000	-.500	.140
.000	-.500	.140
.000	-.500	.280
.000	-.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO	IN
LREF	5.3130	IN	IN
BREF	5.3130	IN	IN
XMRP	2.5490	IN	IN
YMRP	.0000	IN	IN
ZMRP	.0000	IN	IN
SCALE	.0010		



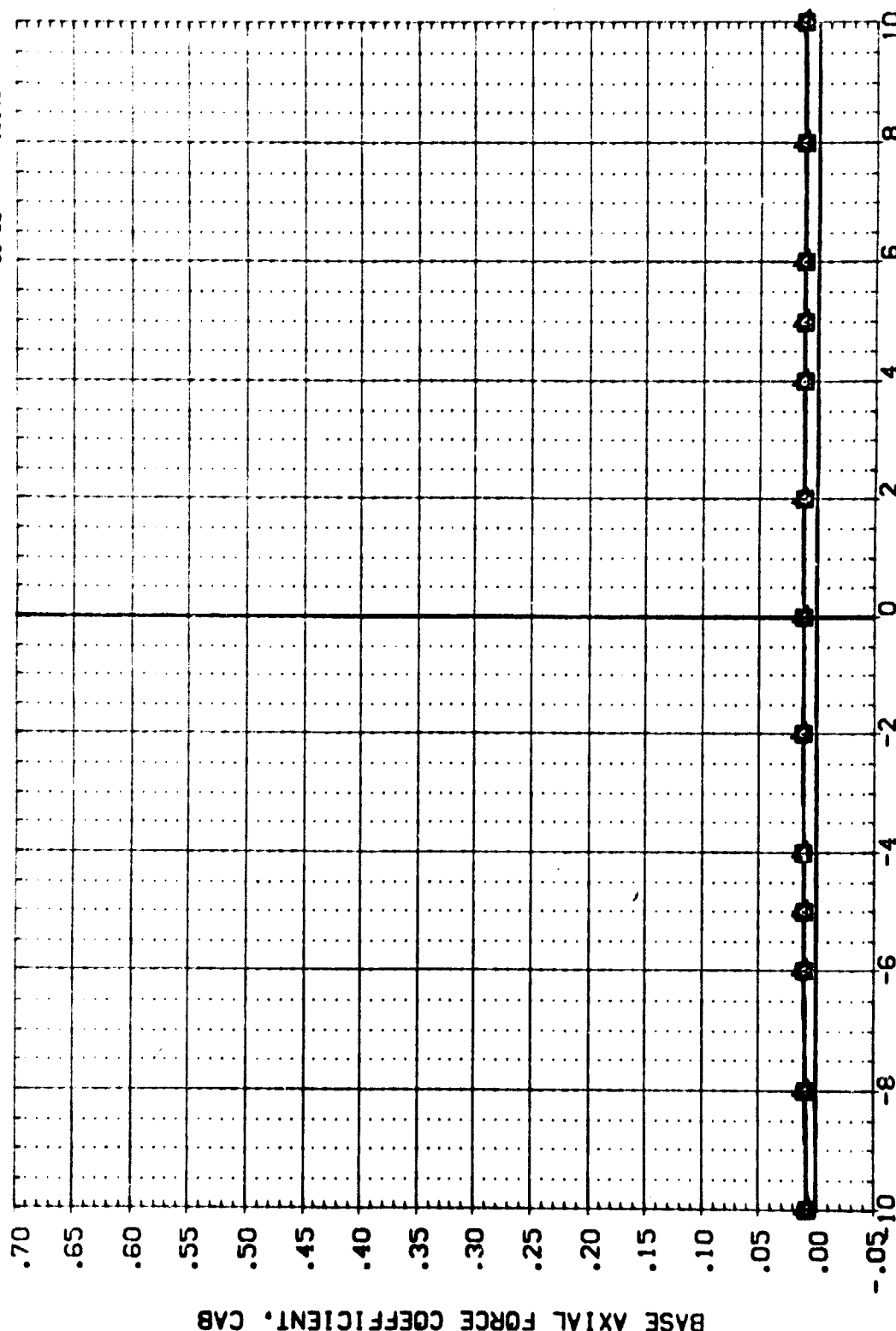
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(H)MACH = 2.99

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	.500	.140	BREF 5.3130
(C83004)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	-.500	.280	XMRP 2.5490
(C83005)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	.500	.280	YMRP .0000
(C83006)	MSFC 570 (A31F) (03) (T9) (S3/2) (S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



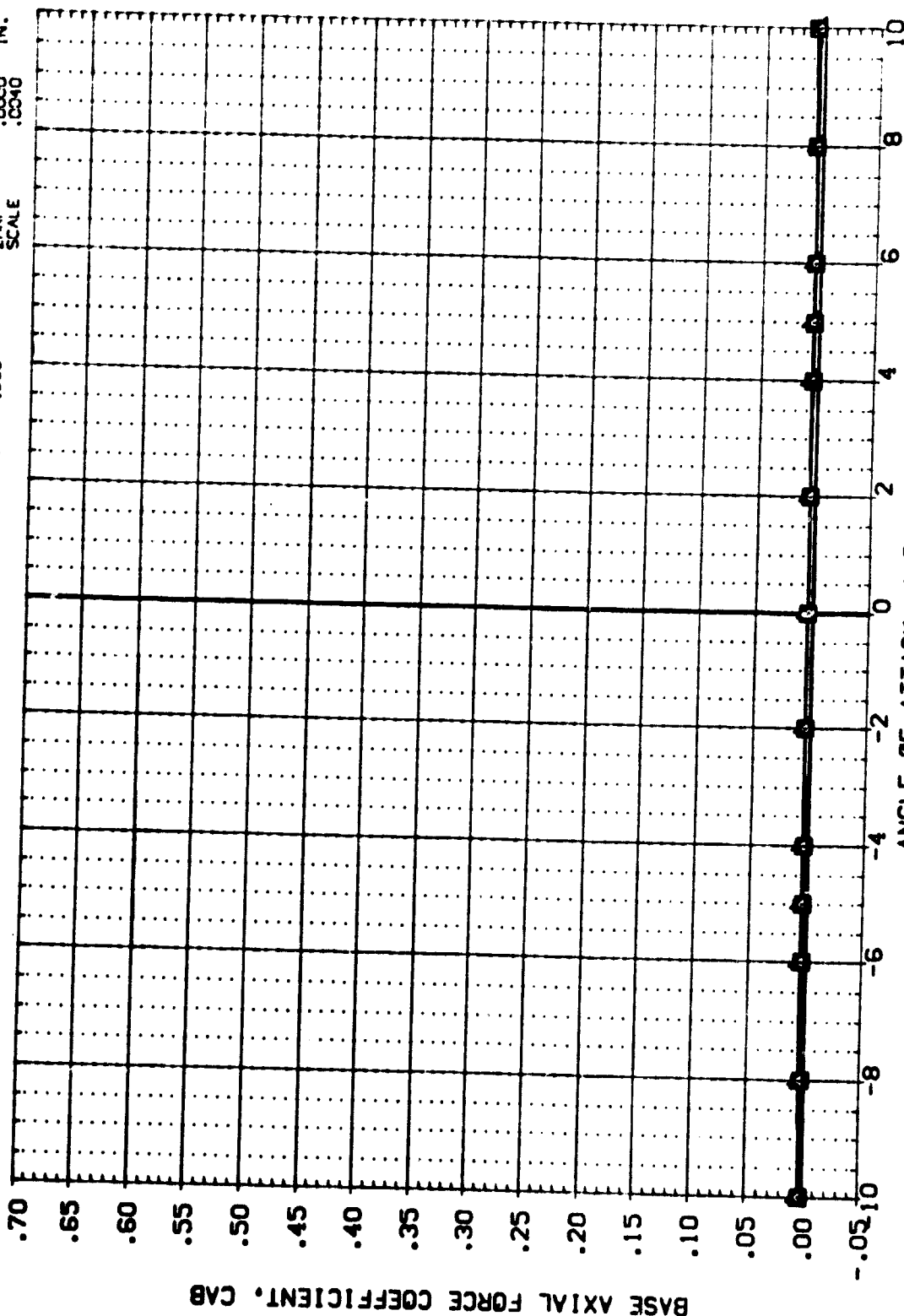
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(1)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83001) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)
 (C83002) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)
 (C83003) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)
 (C83004) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)
 (C83005) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)
 (C83006) H5FC 570(IA3IF)(03)(T9)/(S3/2)/(S3/2)

BETA ORBIT INC DELTA Z
 .000 -.500 .140
 .000 .500 .140
 .000 1.500 .280
 .000 -.500 .280
 .000 1.500 .280

REFERENCE INFORMATION
 SREF 6.1980 SO. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .C040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(J)MACH = 4.96

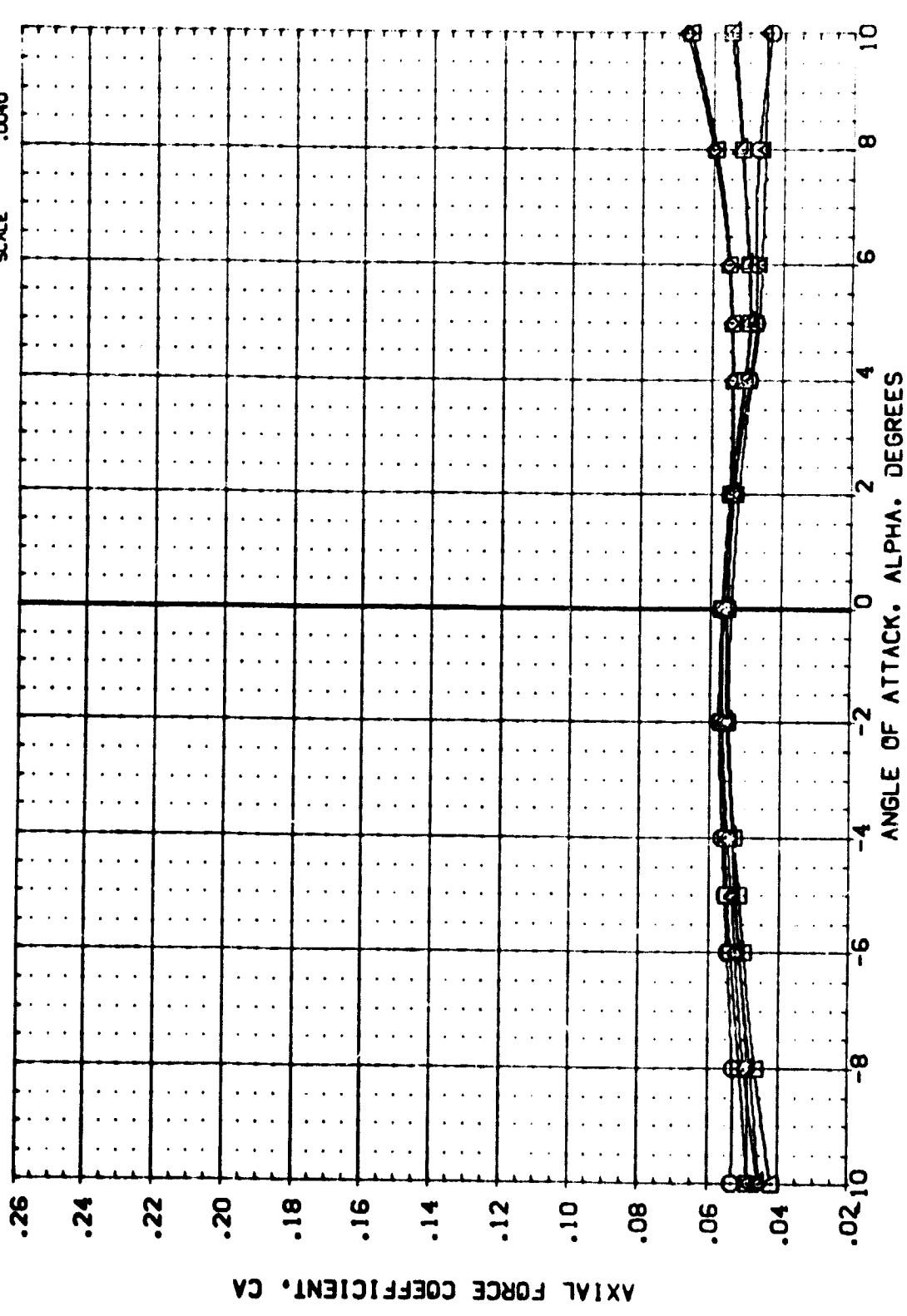
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.198C SQ. IN
(C83002)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.313C
(C83003)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.313C
(C83004)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.548C
(C83005)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .000C
(C83006)	MSFC 570(IA3IF)(C31)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .000C
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(A)MACH = .60

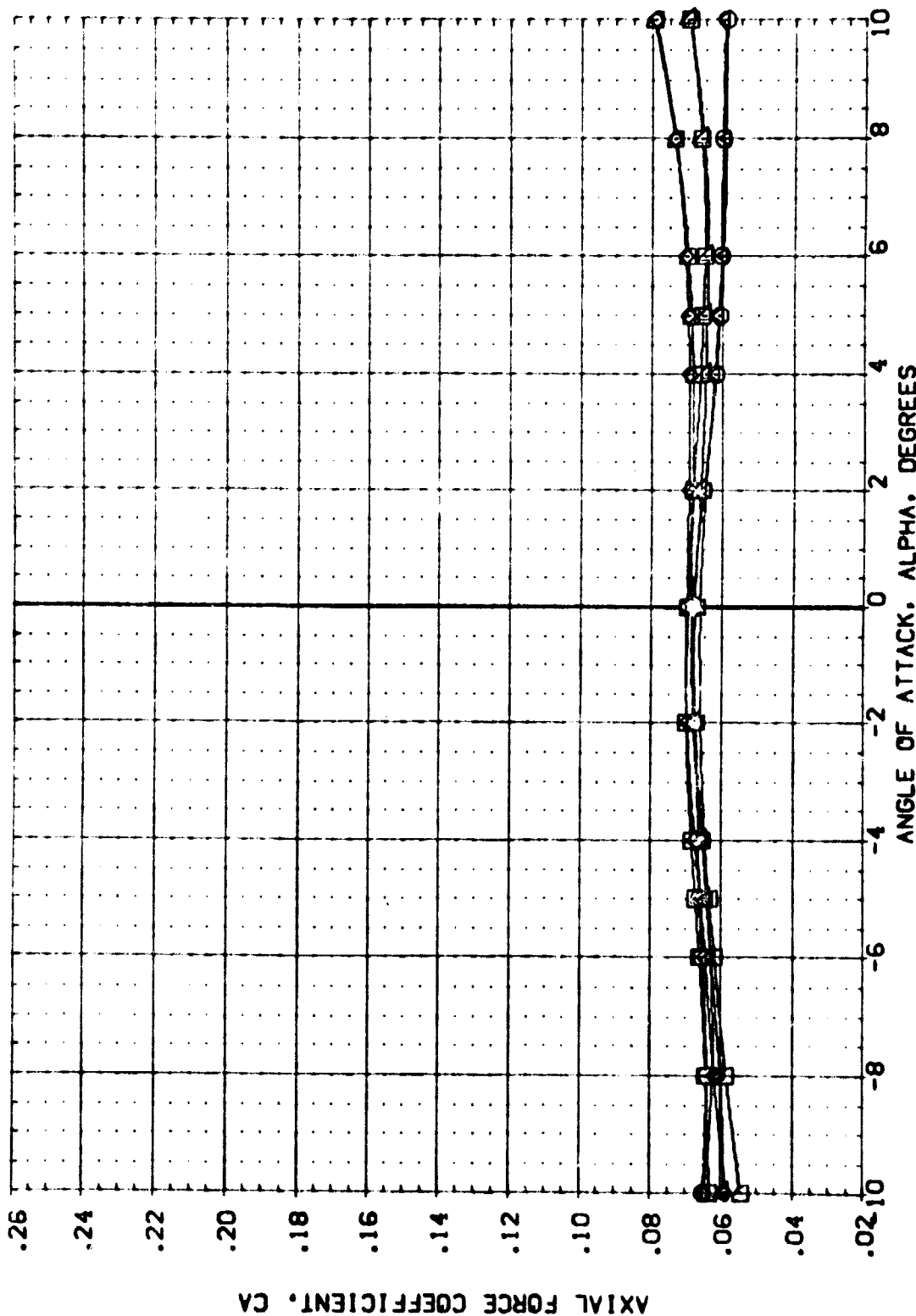
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C00001)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.140	SREF 5.1900 IN
(C00002)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C00003)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.140	BREF 2.5450 IN
(C00004)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.280	VMREF .0000 IN
(C00005)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.280	ZMREF .0000 IN
(C00006)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(B)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 5.1980 50. IN
(C83002)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 12. IN
(C83003)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 12. IN
(C83004)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP 2.5450 22. IN
(C83005)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 22. IN
(C83006)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	SCALE .0000 22. IN



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = .90

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

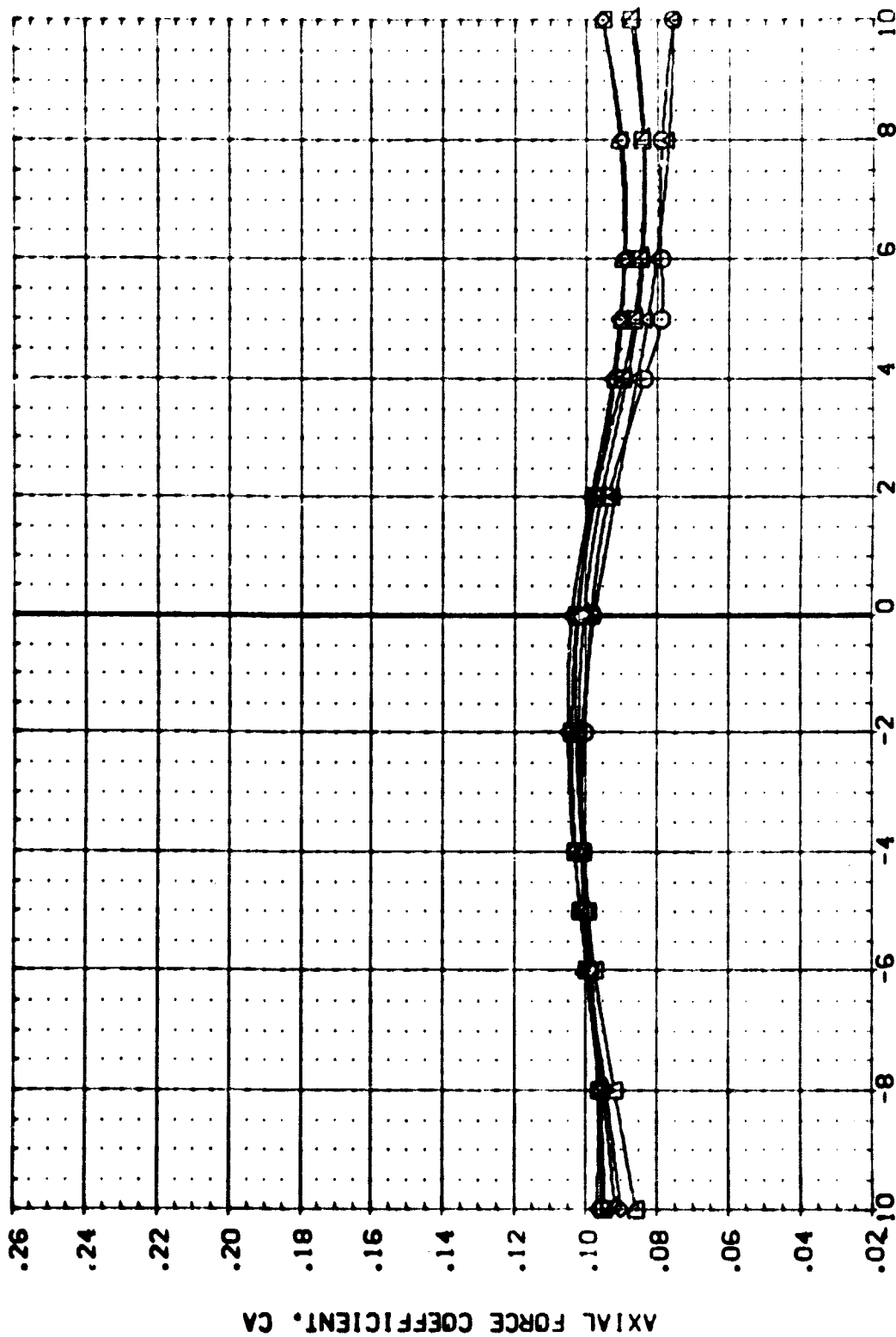
(C83001)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)
(C83002)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)
(C83003)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)
(C83004)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)
(C83005)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)
(C83006)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)

BETA ORBITAL DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.280
.000	-.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
X-MRP	2.5490	IN.
Y-MRP	.0000	IN.
Z-MRP	.0000	IN.
SCALE	.0040	



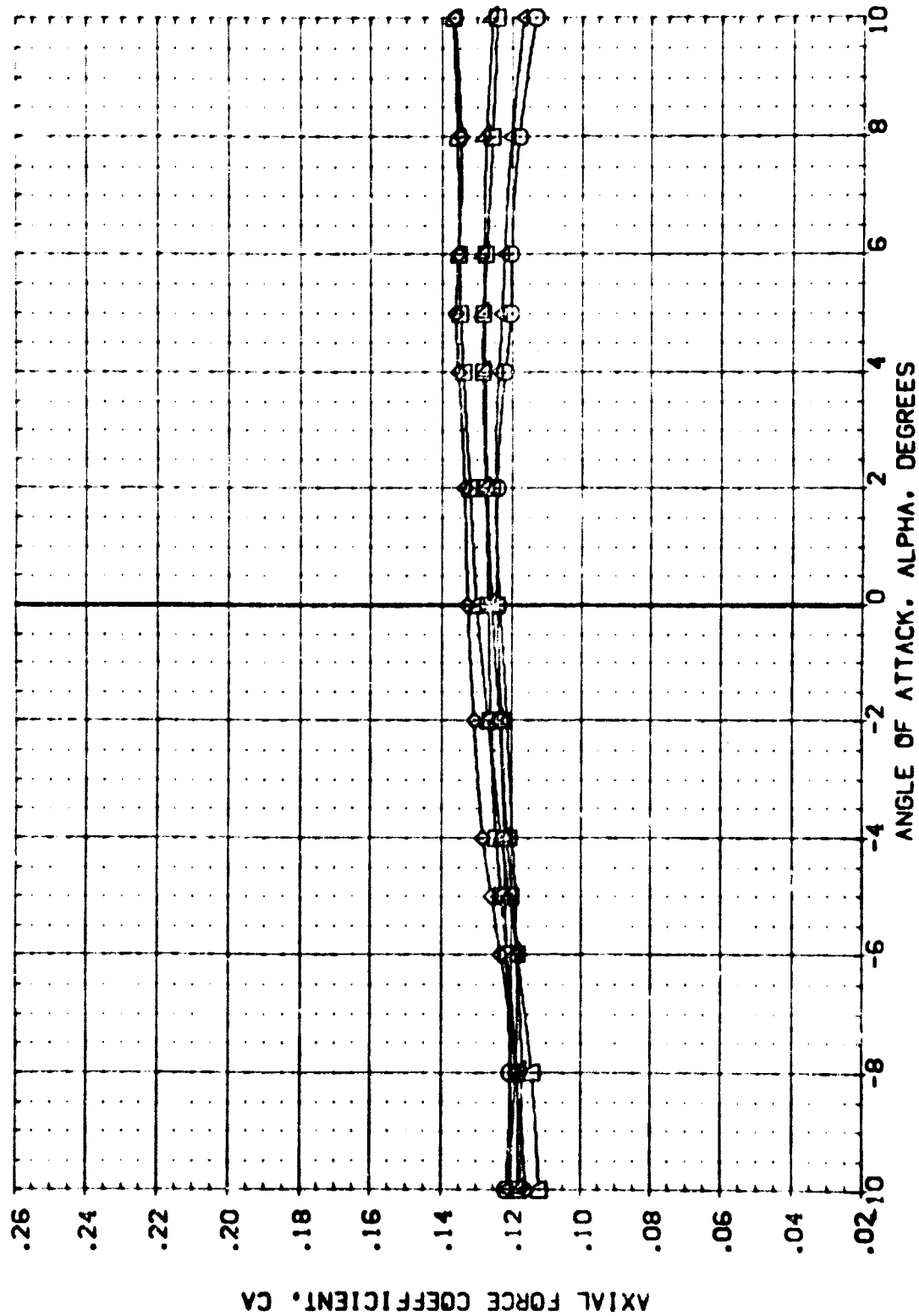
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = 1.05

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83001)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	SREF 5.1980 SO. IN
(C83002)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83003)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	BREF 5.3130
(C83004)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	XMRP 2.545C
(C83005)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	YMRP .000C
(C83006)	MFC 570((A3IF)(C3)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	ZMRP .000C
					SCALE .034C



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(E)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(030001) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

(030002) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

(030003) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

(030004) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

(030005) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

(030006) MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORIGINC DELTAZ

.000 -.500 .140

.000 -.500 .140

.000 -.500 .140

.000 -.500 .290

.000 -.500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 5.1980 SQ. IN

LREF 5.3130 IN.

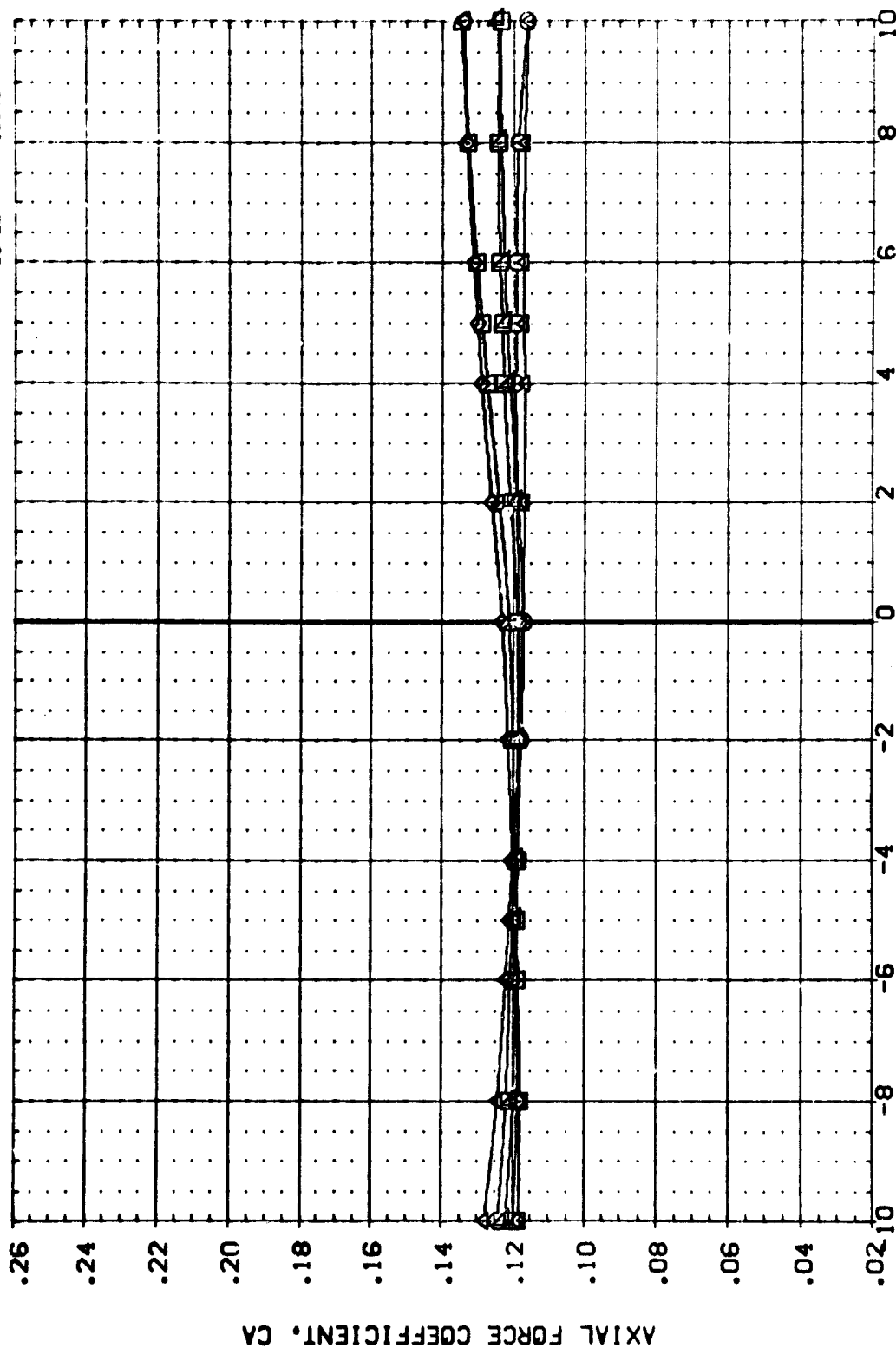
BREF 5.3130 IN.

XMRP 2.5450 IN.

YMRP .0000 IN.

ZMRP .0000 IN.

SCALE .0040



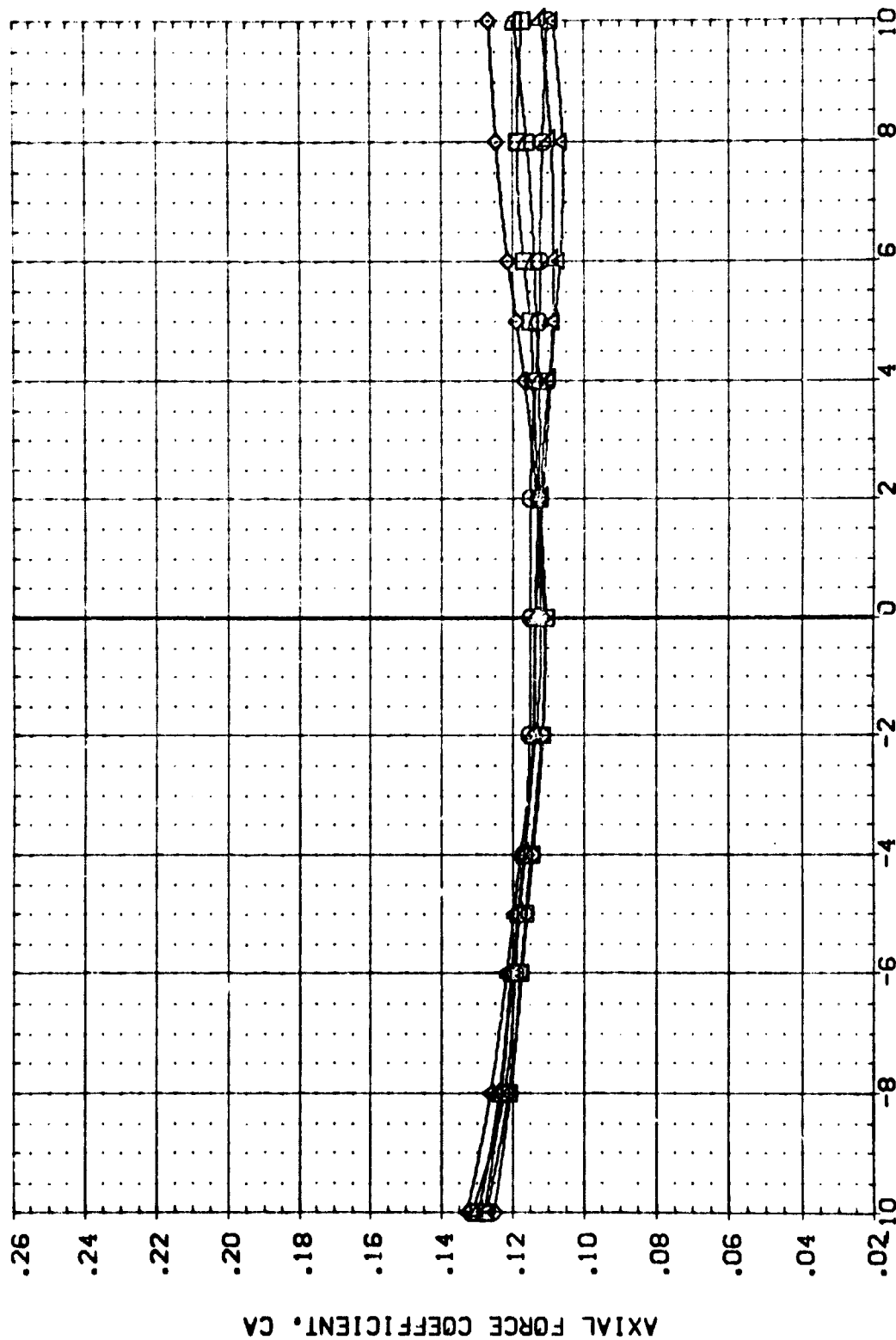
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(F)MACH = 1.46

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46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040

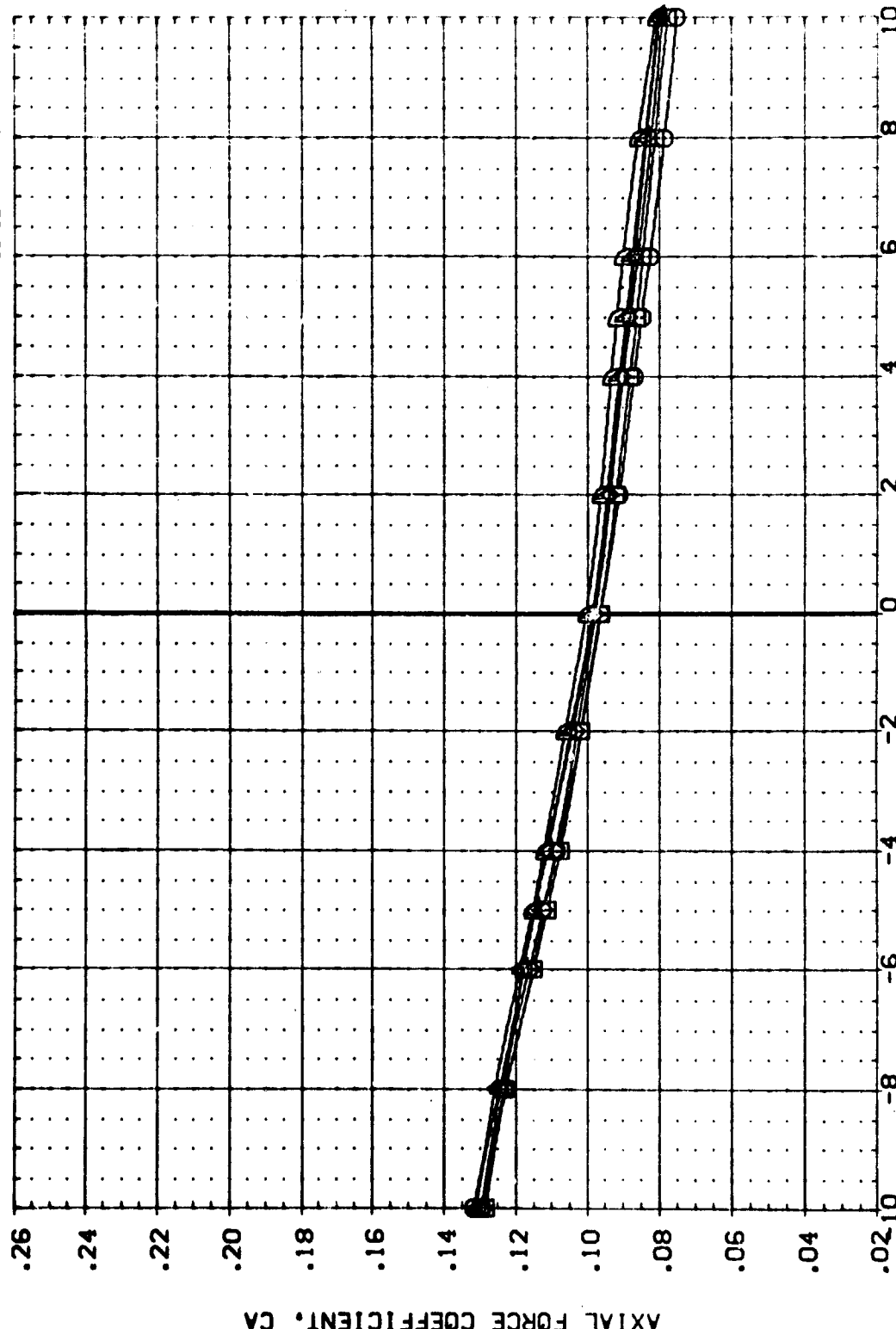


AXIAL FORCE COEFFICIENT, CA

ANGLE OF ATTACK, ALPHA, DEGREES

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.260	XMRP 2.5490
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.260	YMRP .0000
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.260	ZMRP .0000
					SCALE .0040



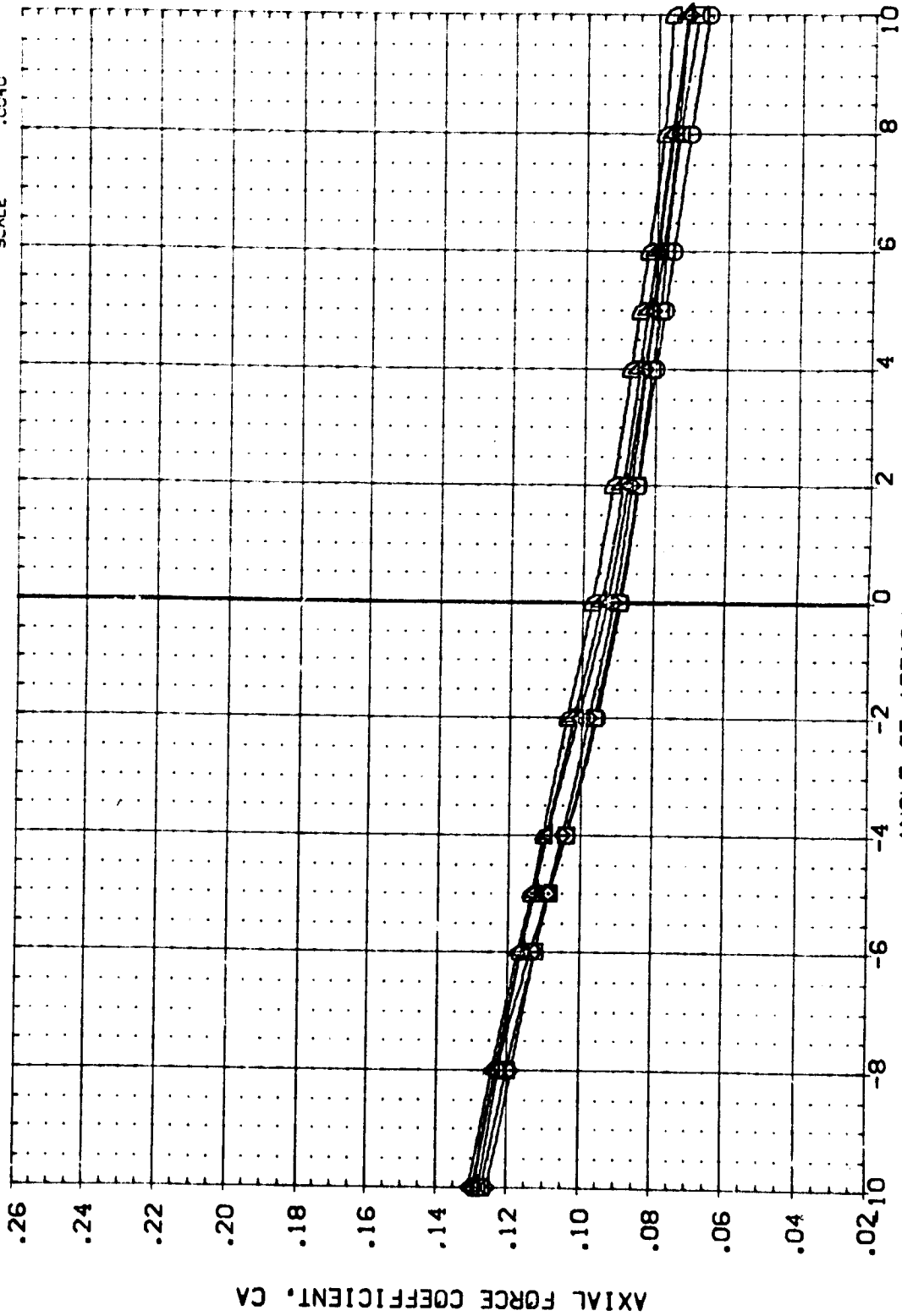
AXIAL FORCE COEFFICIENT, CA

ANGLE OF ATTACK, ALPHA, DEGREES

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)







(H)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 5.1980 SO. IN
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(1)MACH = 3.48

DATA SET SYMBOL	DATA SET SYMBOL
(C83001)	
(C83002)	
(C83003)	
(C83004)	
(C83005)	
(C83006)	

DATA SET	SYMBOL
(C83001)	
(C83002)	
(C83003)	
(C83004)	
(C83005)	
(C83006)	

(C83001)
(C83002)
(C83003)
(C83004)
(C83005)
(C83006)

DATA SET SYMBOL

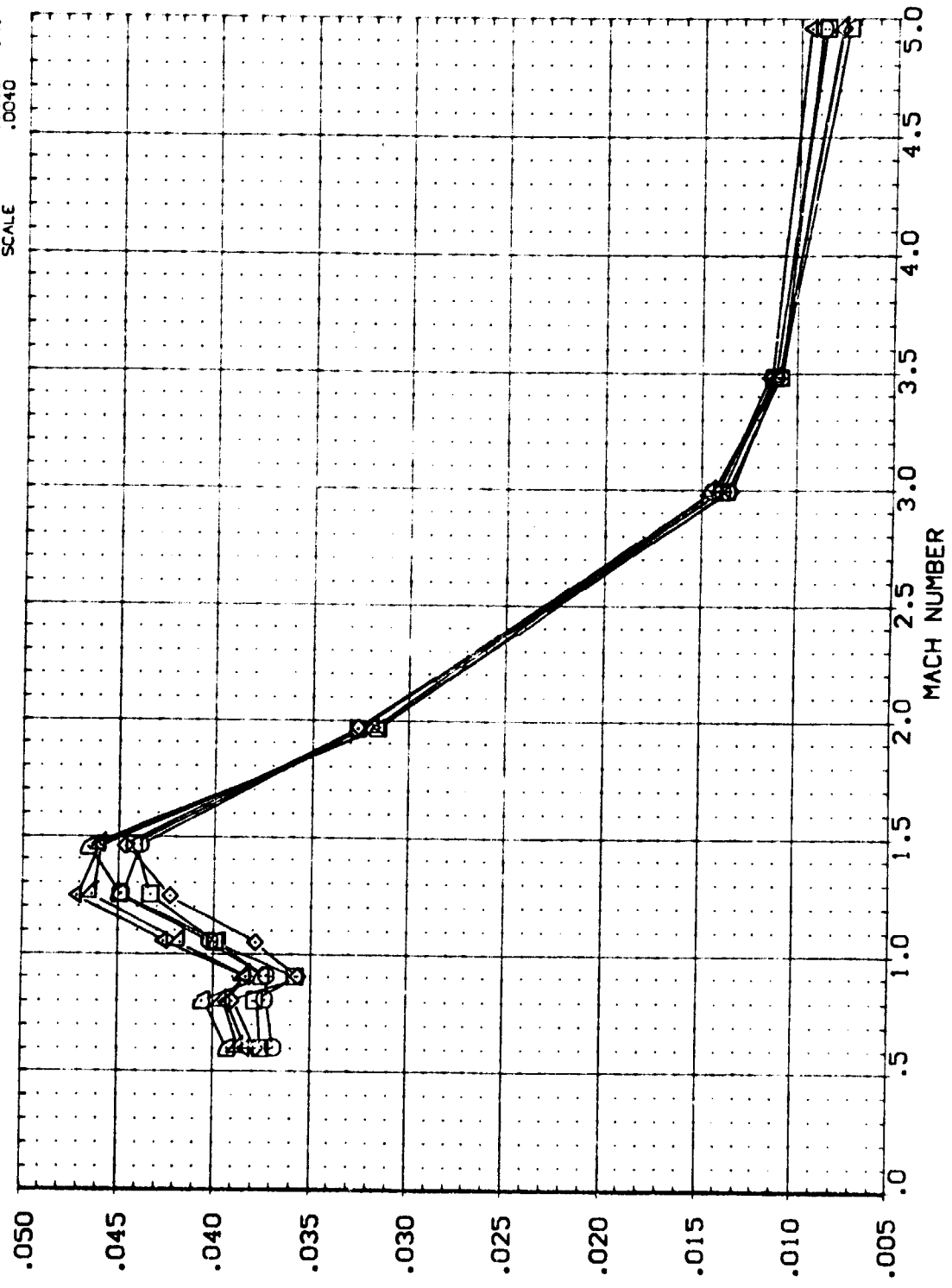
(C83001)
(C83002)
(C83003)
(C83004)
(C83005)
(C83006)

(C83001)
(C83002)
(C83003)
(C83004)
(C83005)
(C83006)

STABILITY

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040

NORMAL FORCE COEFFICIENT DERIVATIVE WITH ALPHA, CNALFA, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2))/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

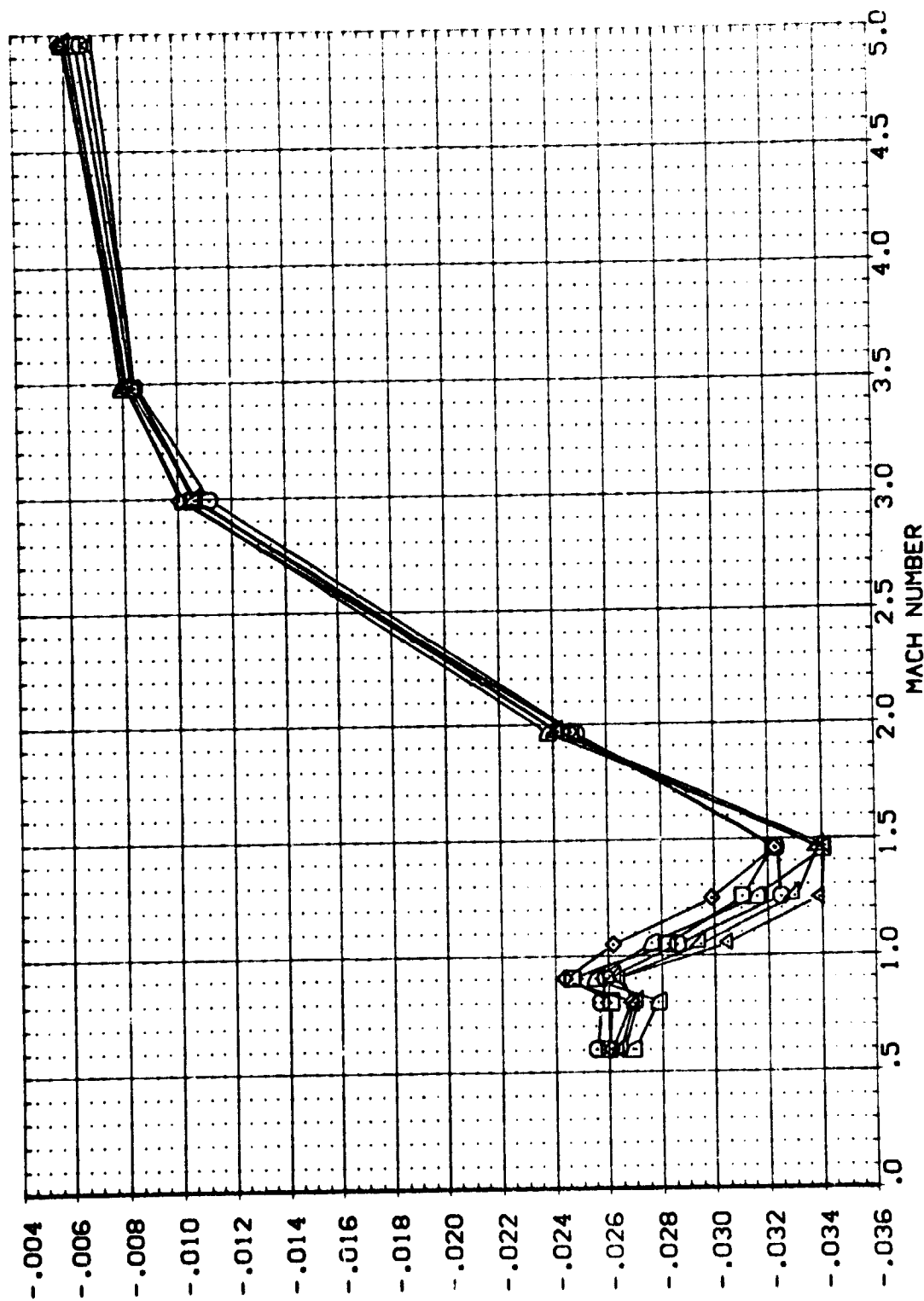
(C83001) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
 (C83002) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
 (C83003) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
 (C83004) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
 (C83005) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
 (C83006) MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBITING DELTA Z

.000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140

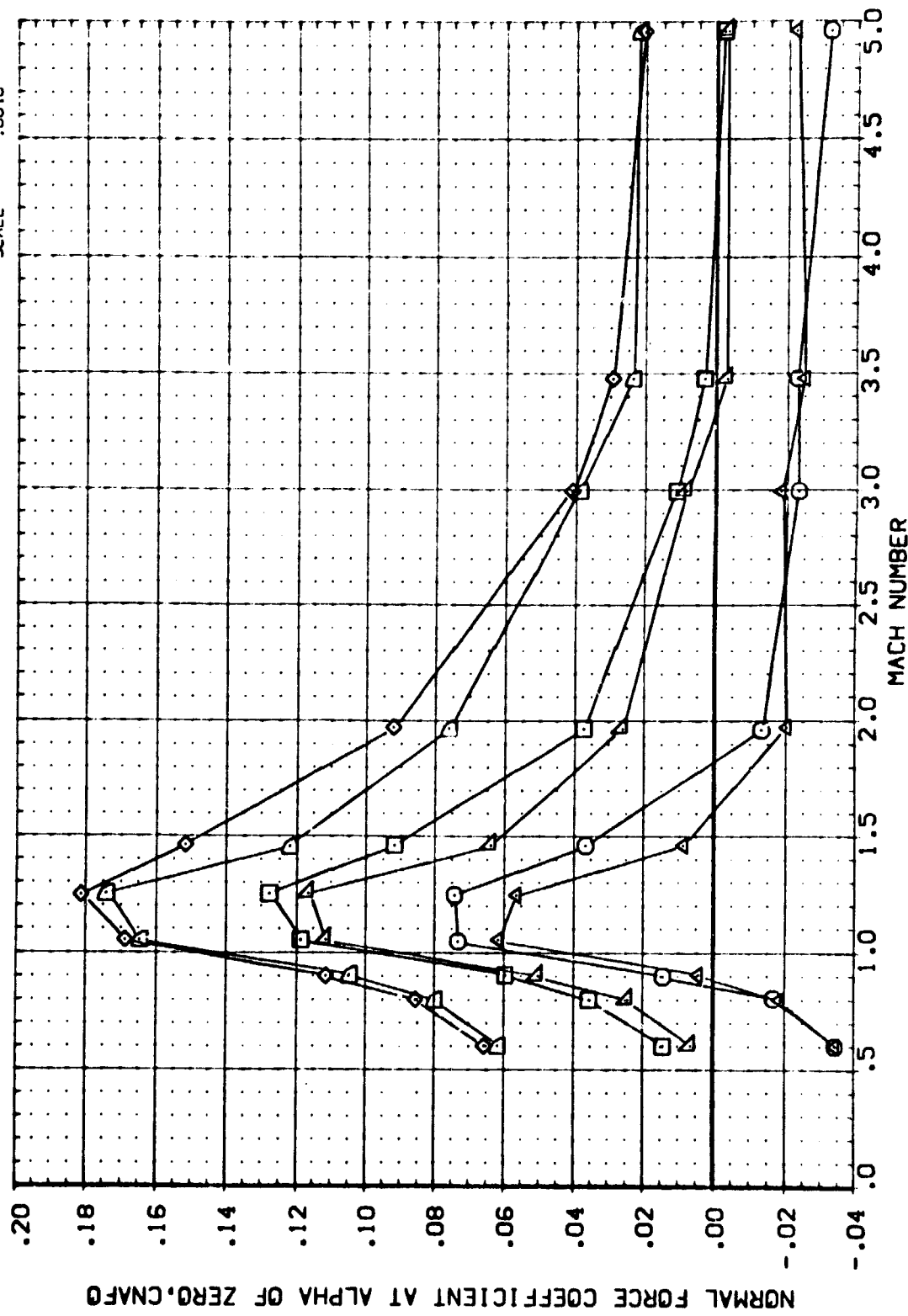
REFERENCE INFORMATION

SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5450 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83001)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83002)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83003)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83004)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP 2.5490
(C83005)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
(C83006)	M5FC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

DATA SET SYMBOL CONFIGURATION DESCRIPTION

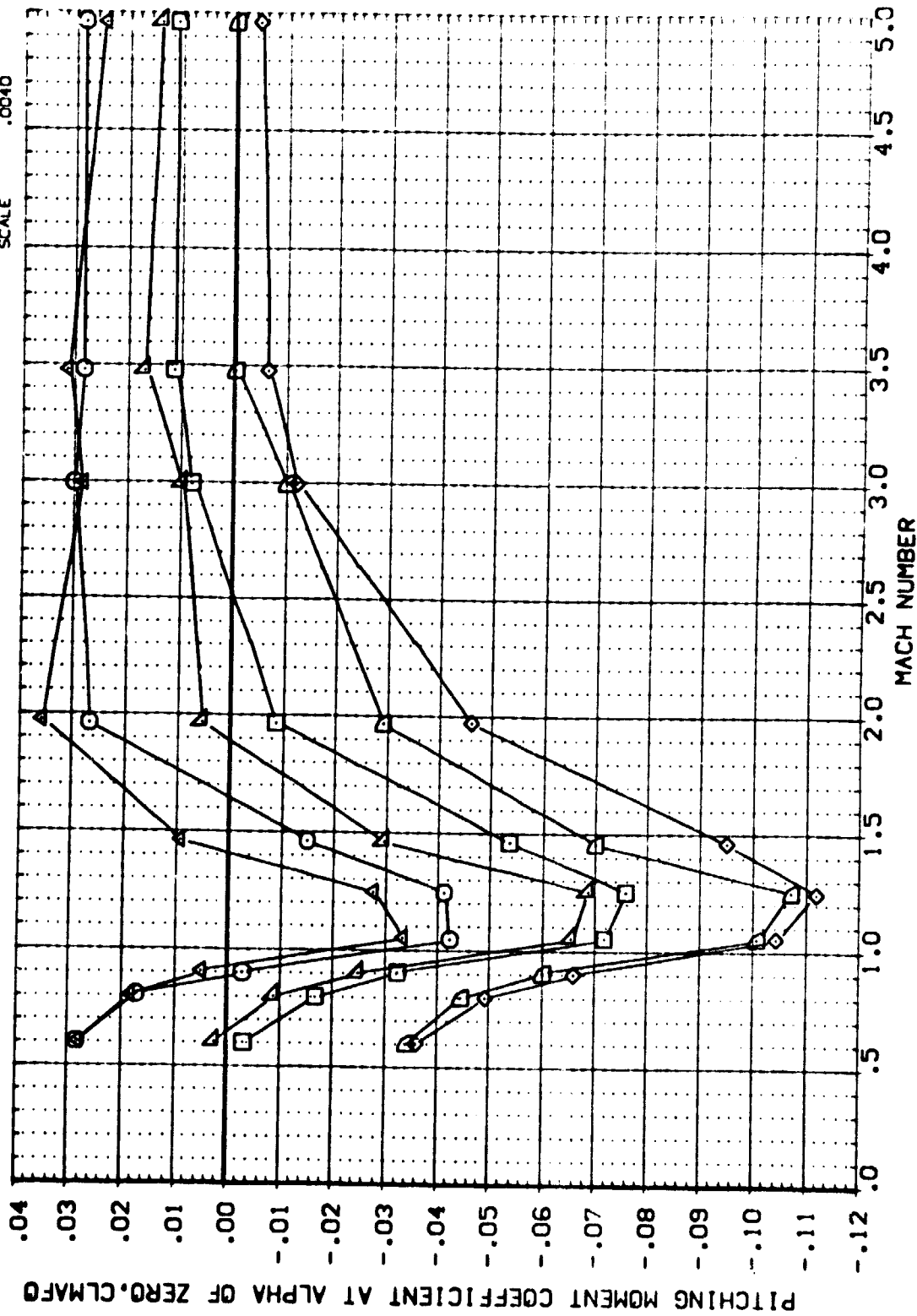
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(C83002)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83003)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83004)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83005)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)
(C83006)	MSFC 570(I A31F)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBIT INC DELTA Z

.000	.500	.140
.000	.500	.140
.000	.500	.140
.000	.500	.280
.000	.500	.280
.000	.500	.280

REFERENCE INFORMATION

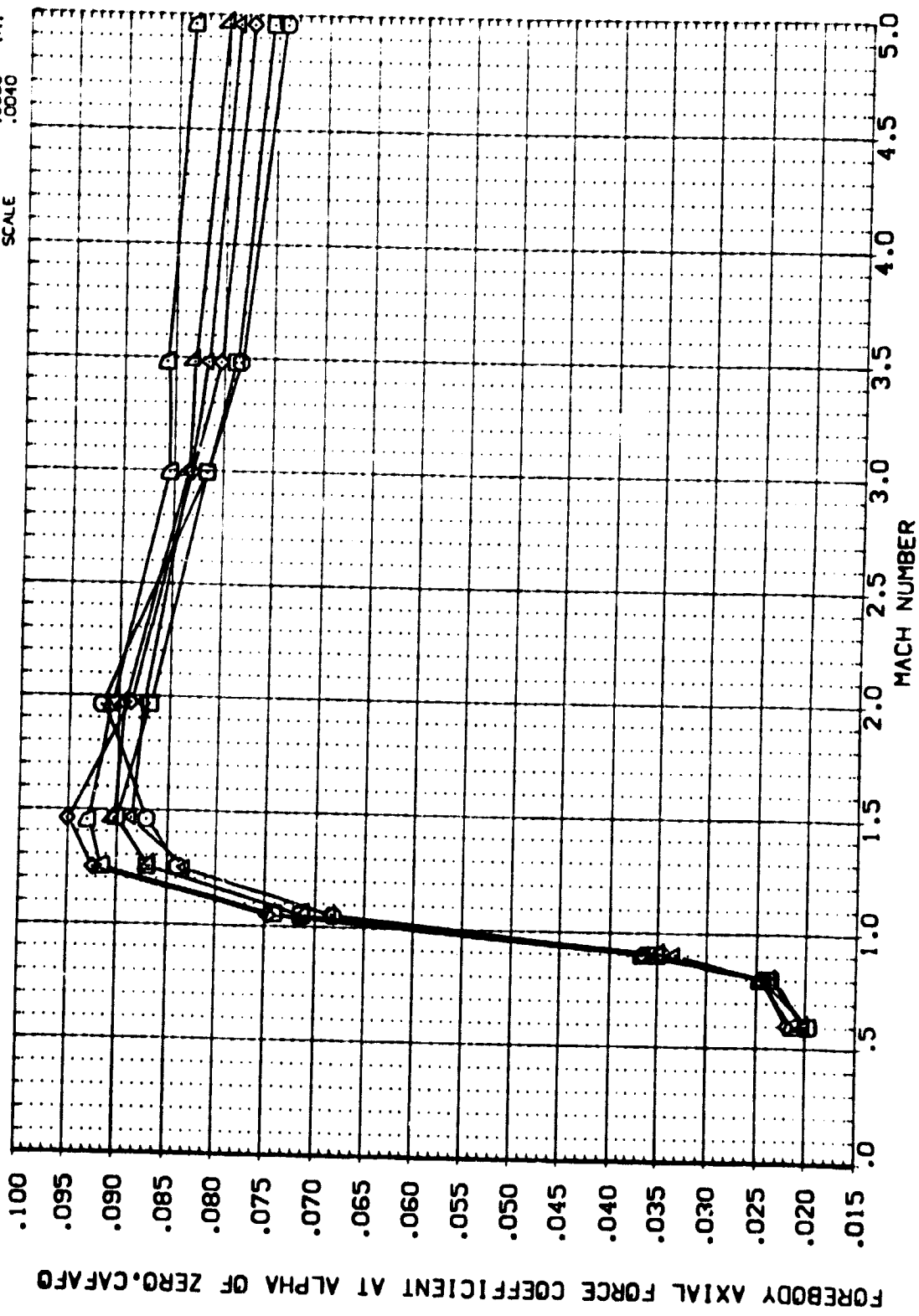
SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5490	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

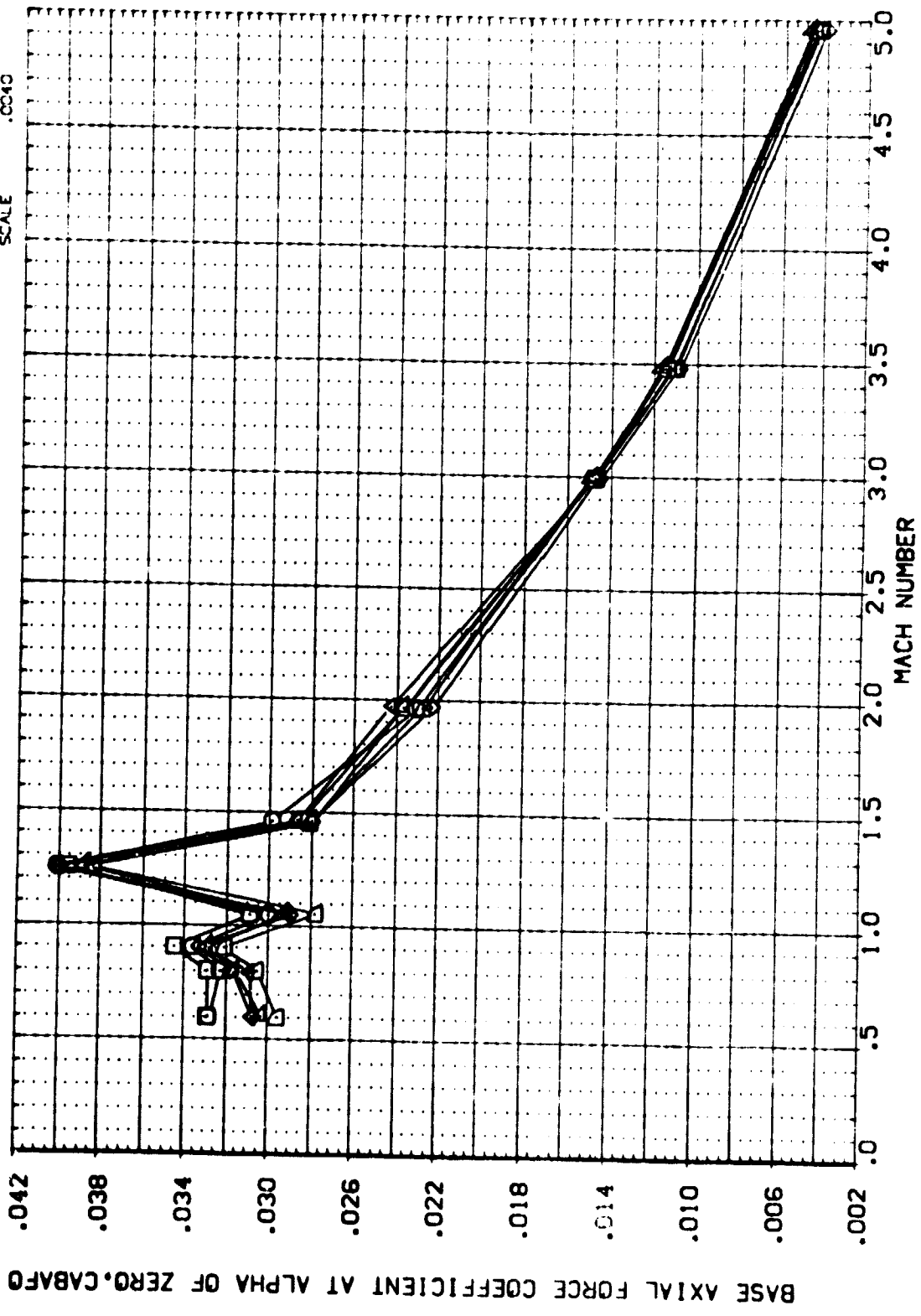
DATA SET SYMBOL. CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DBINC	DELTA Z	REFERENCE INFORMATION
(C83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83004)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83005)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83006)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



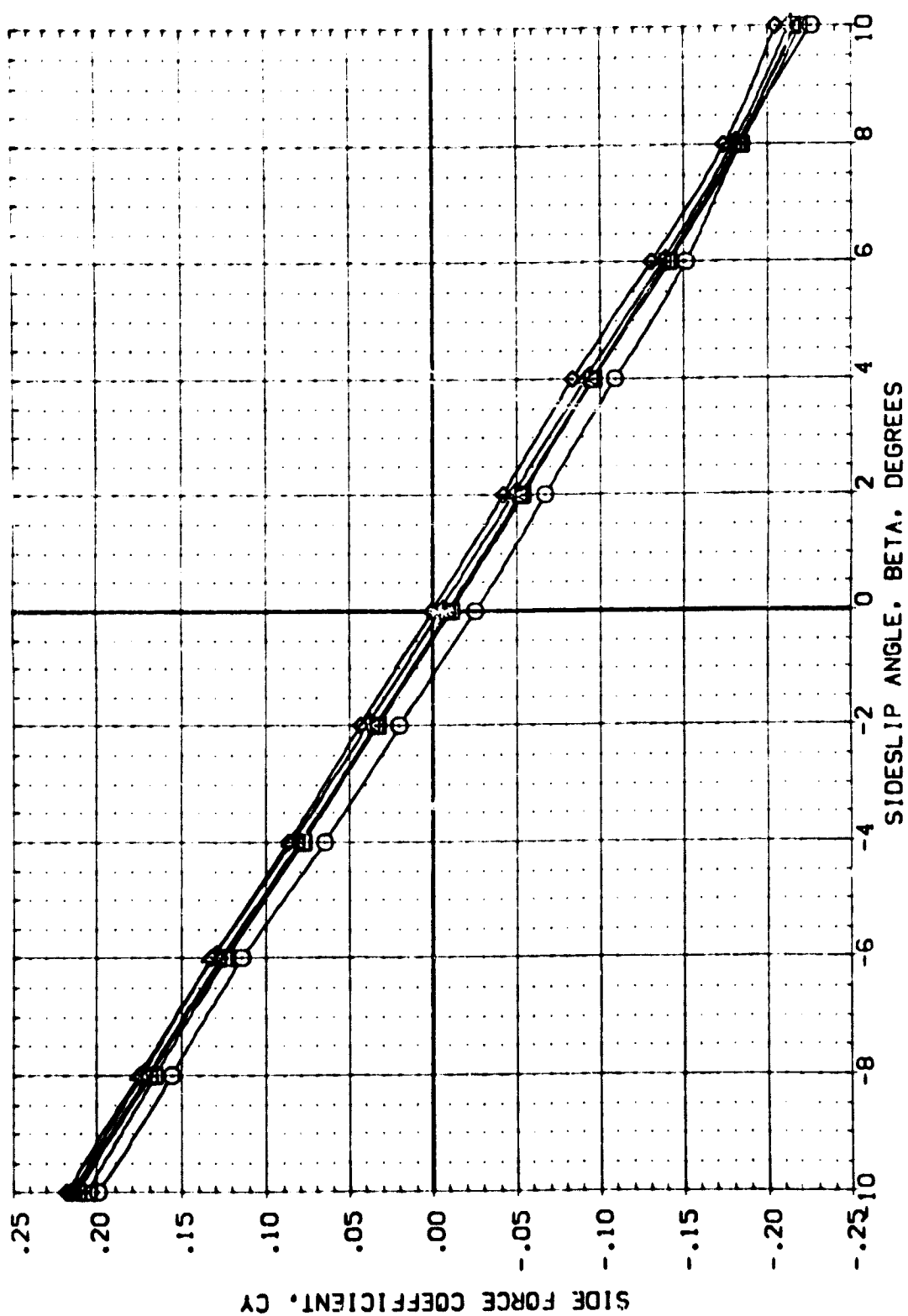
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL INC	DELTA Z	REFERENCE INFORMATION
(C83001)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83002)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130 IN
(C83003)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130 IN
(C83004)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP 2.5490 IN
(C83005)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	.500	.280	YMRP .0000 IN
(C83006)	M5C 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1960
(A83009)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130
(A83010)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	BREF 5.3130
(A83011)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490
(A83012)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000
(A83013)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP .0000
					SCALE .0040



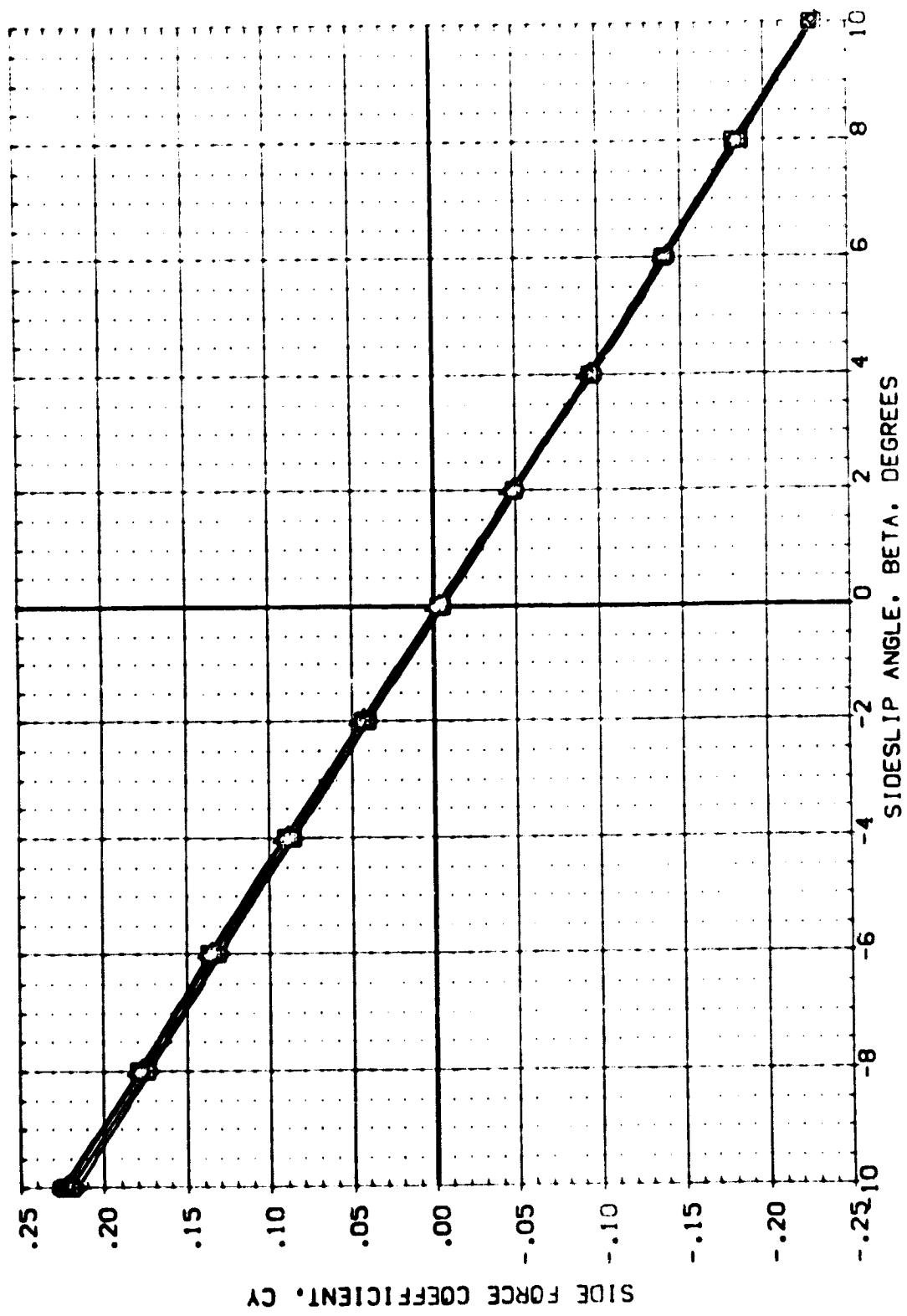
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(A)MACH = .90

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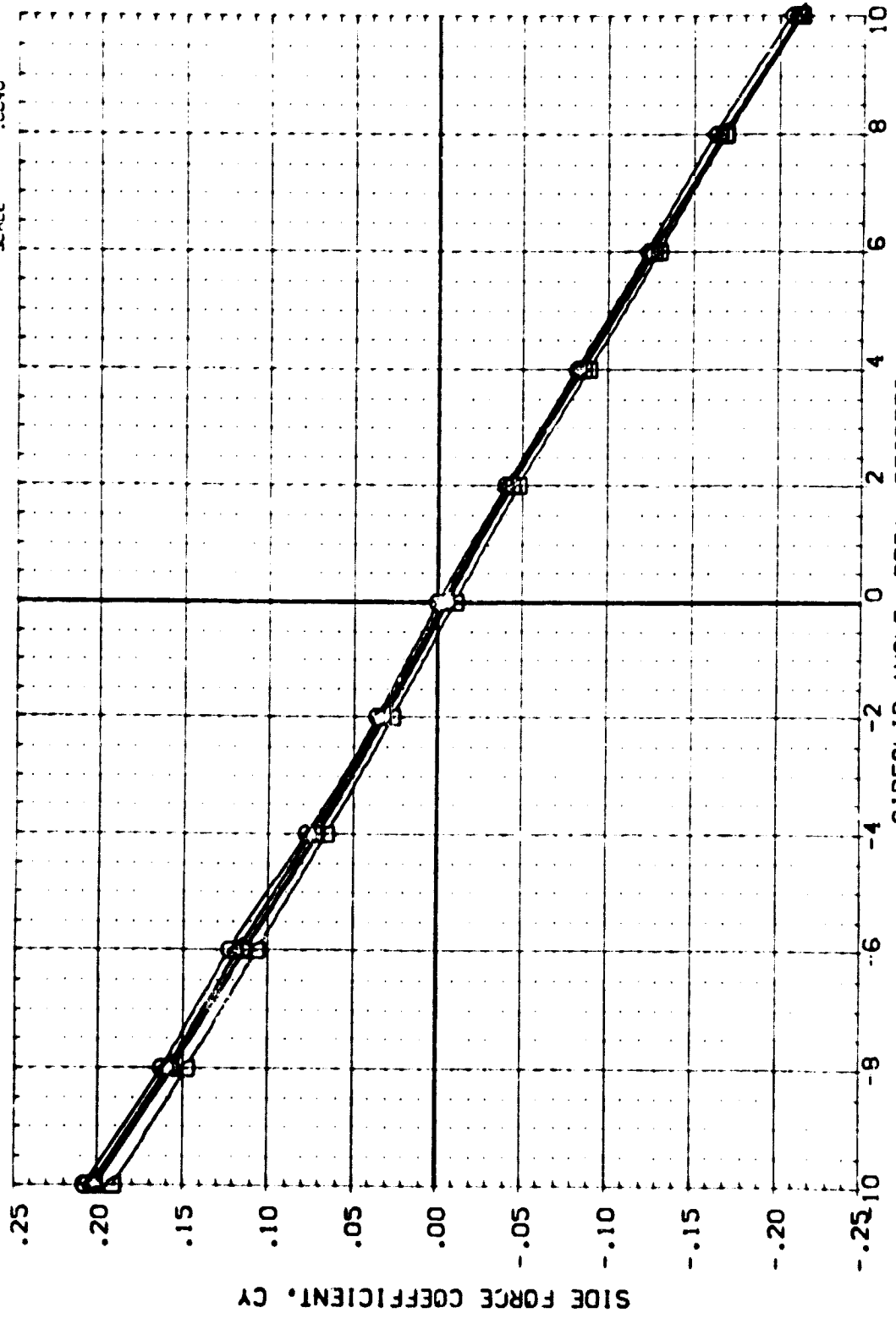
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(A83009)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	SREF	6.1980
(A83009)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	LREF	5.3130
(A83010)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	1500	.140	BREF	5.3130
(A83011)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	XPROP	2.5490
(A83012)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	YPROP	.0000
(A83013)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	1500	.280	ZPROP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

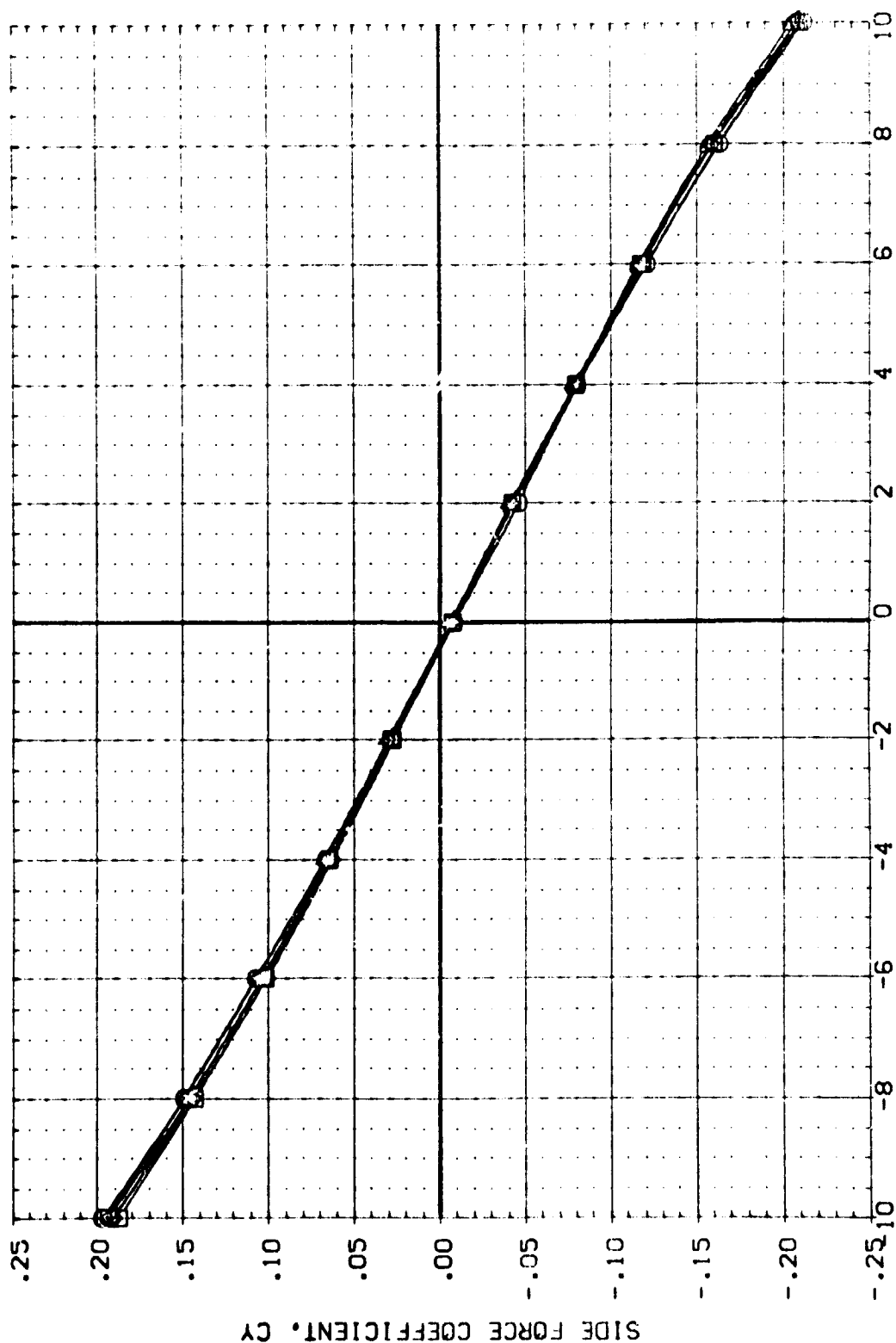
(B)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.140	SREF 6.1980 SQ. IN
(A83009)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.140	LREF 5.3130
(A83010)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.140	BREF 5.3130
(A83011)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.280	XREF 2.5480
(A83012)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.280	YREF .0000
(A83013)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	5.000	-500	.280	ZREF .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

DATA SET SYMBOL	CONF IGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	SREF 6.1980
(A83009)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	LREF 5.3130
(A83010)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	BREF 5.3130
(A83011)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.280	XMPP 2.5490
(A83012)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.280	YMPP .0000
(A83013)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.280	ZMPP .0000
					SCALE .0010

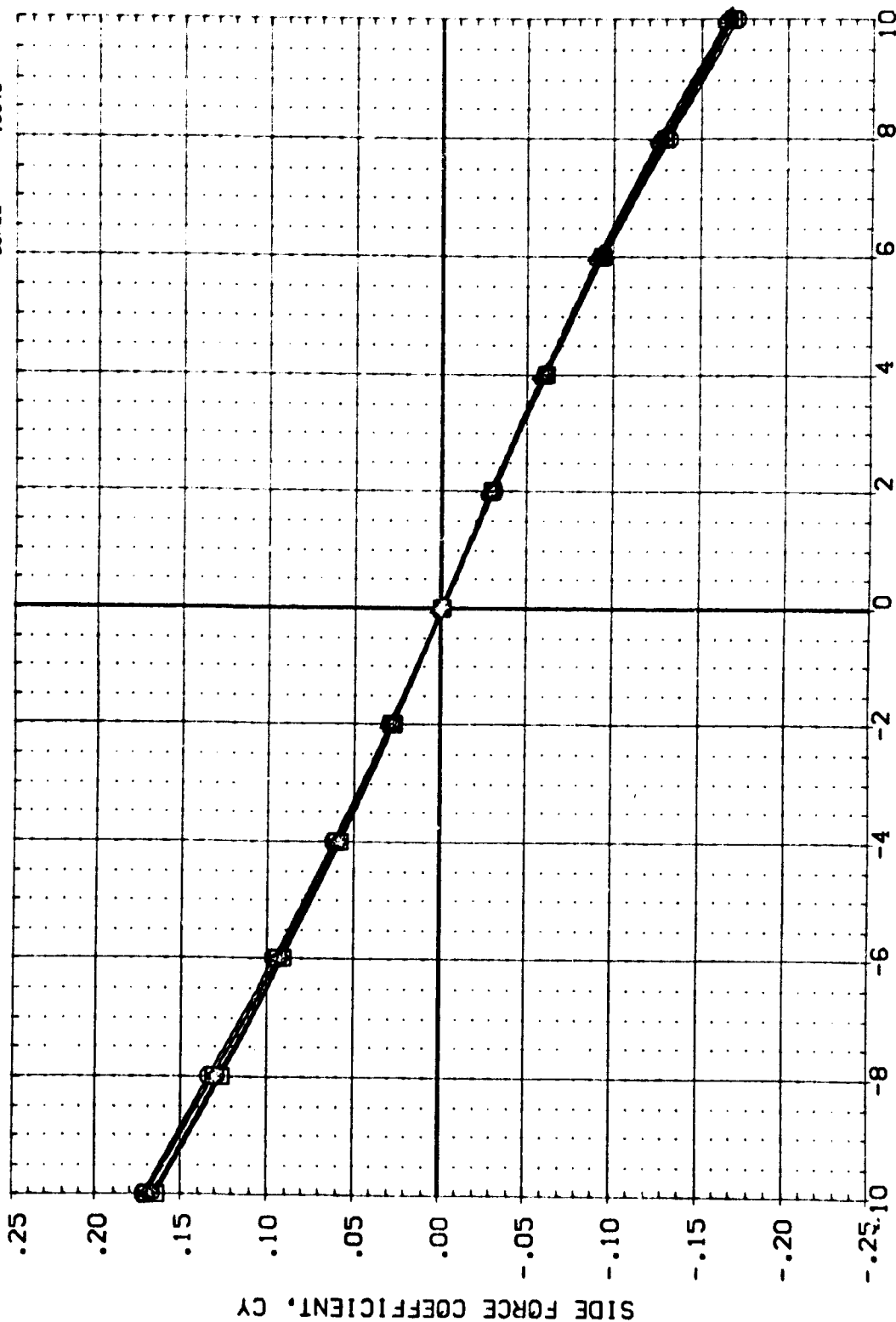


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(C)MACH = 1.46

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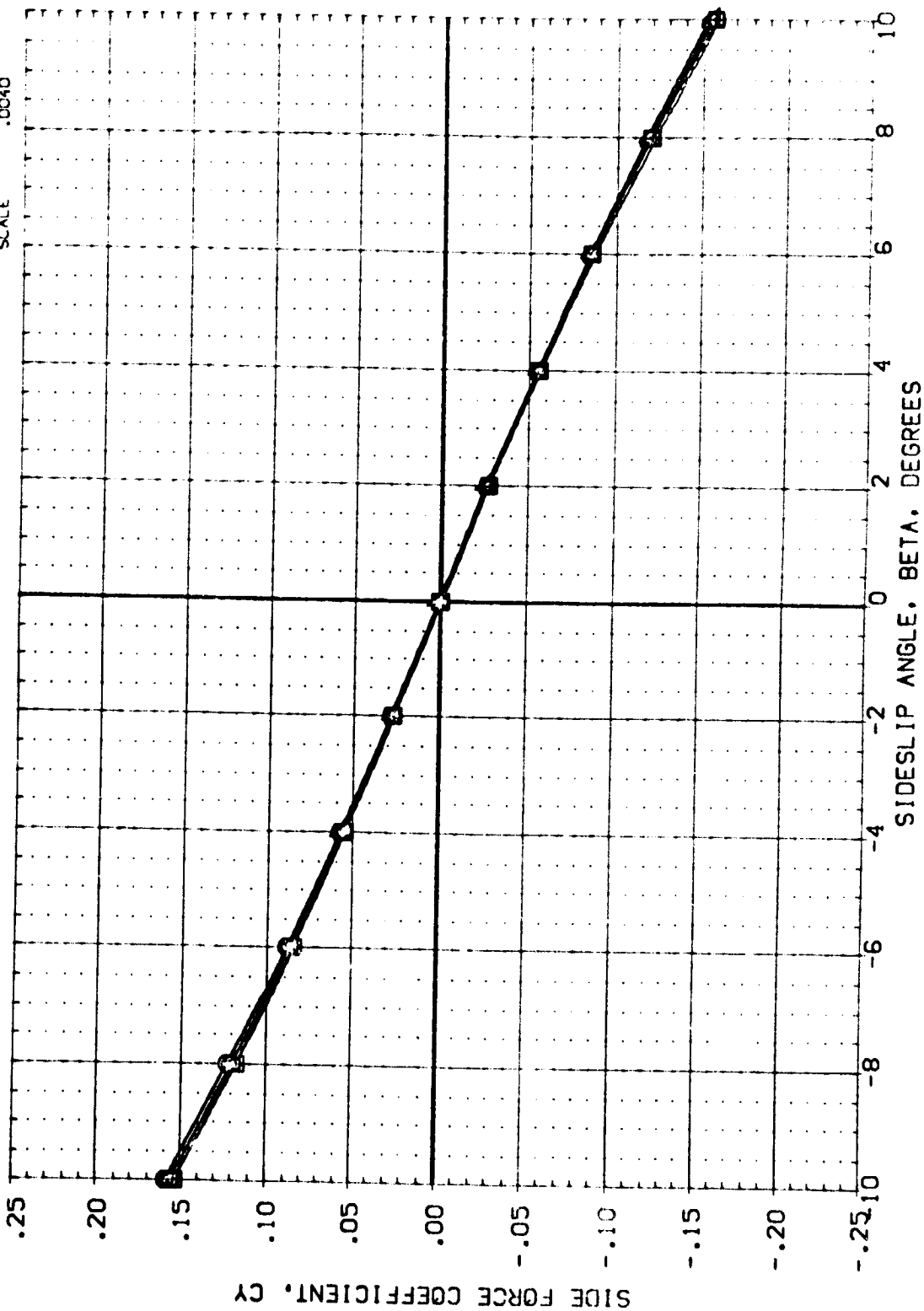
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.140	SREF 6.1980 SC IN
(A83009)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.140	LREF 5.3130 IN
(A83010)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	1500	.140	BREF 5.3130 IN
(A83011)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.280	XMRP 2.5490 IN
(A83012)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.280	YMRP .0000 IN
(A83013)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	1500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/([S3/2])/([S3/2])$

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(AB3008)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.140	SREF 5.1980
(AB3009)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.140	UREF 5.3130
(AB3010)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.140	BREF 5.3130
(AB3011)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.280	XMRP 2.5450
(AB3012)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.280	VMRP .0000
(AB3013)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.280	ZMRP .0000
					SCALE .0040

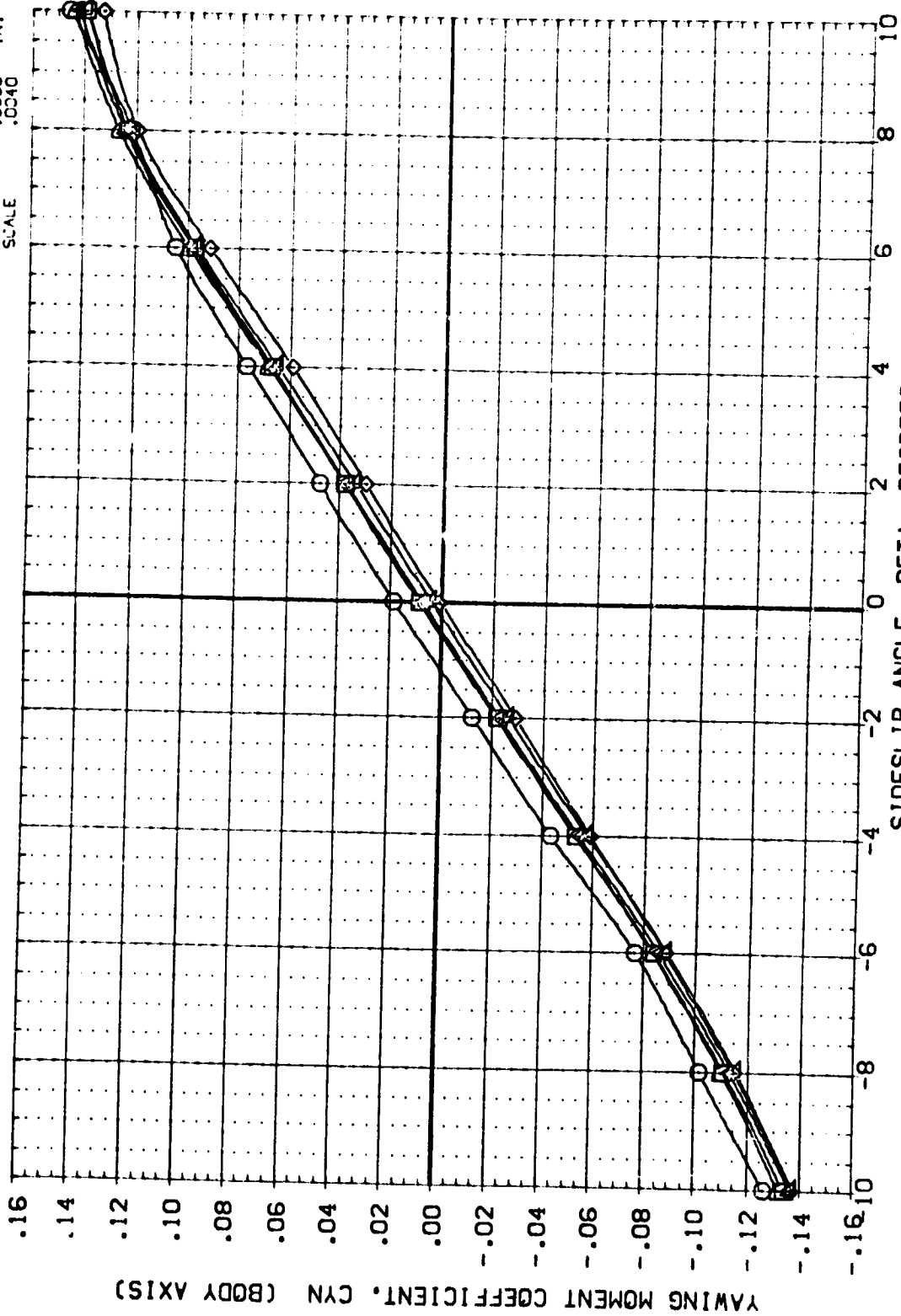


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(F)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORBITAL DELTA Z REFERENCE INFORMATION

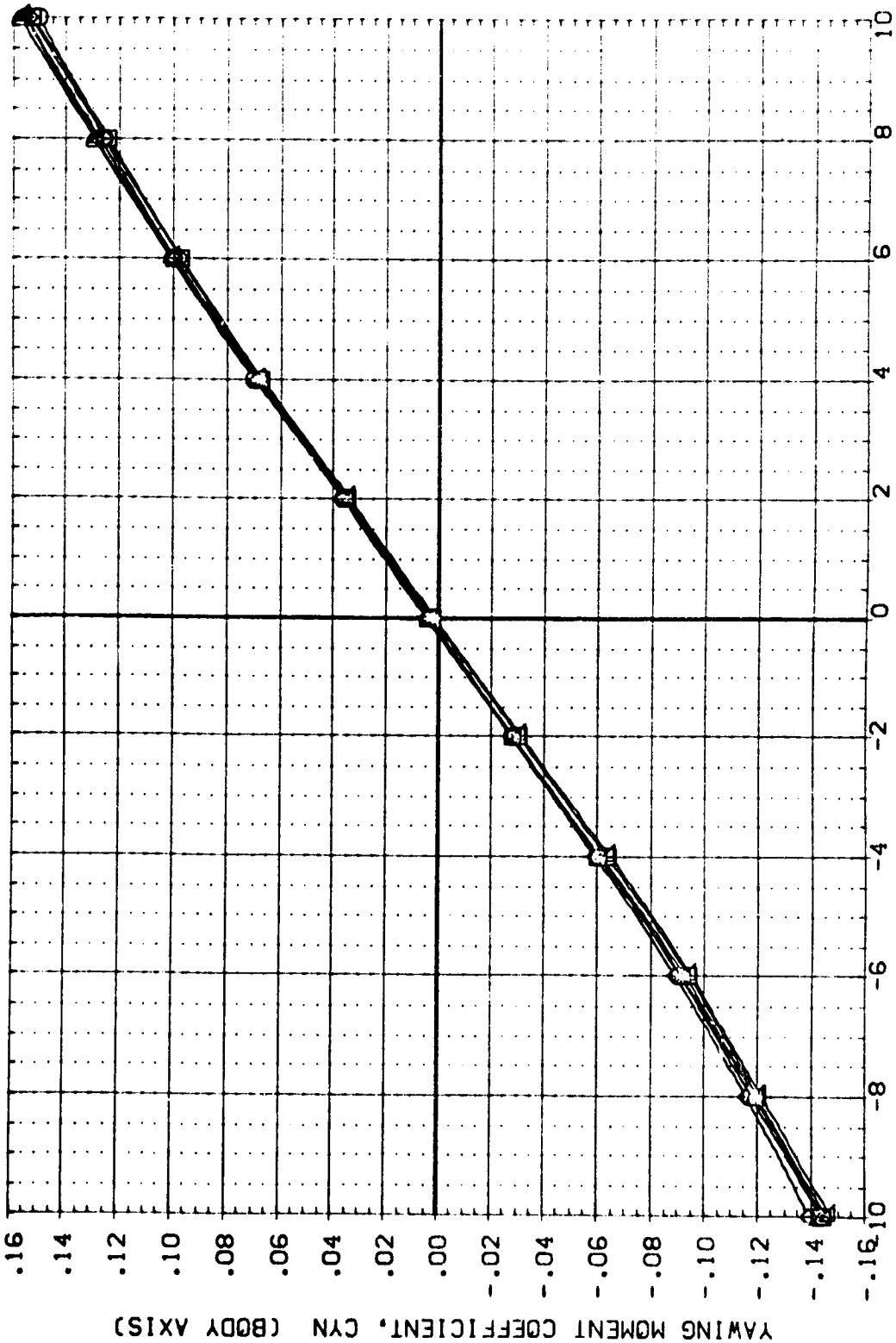
(A83008)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 SO. IN
(A83009)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130 IN.
(A83010)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83011)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490 IN.
(A83012)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000 IN.
(A83013)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0340



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(A)MACH = .90

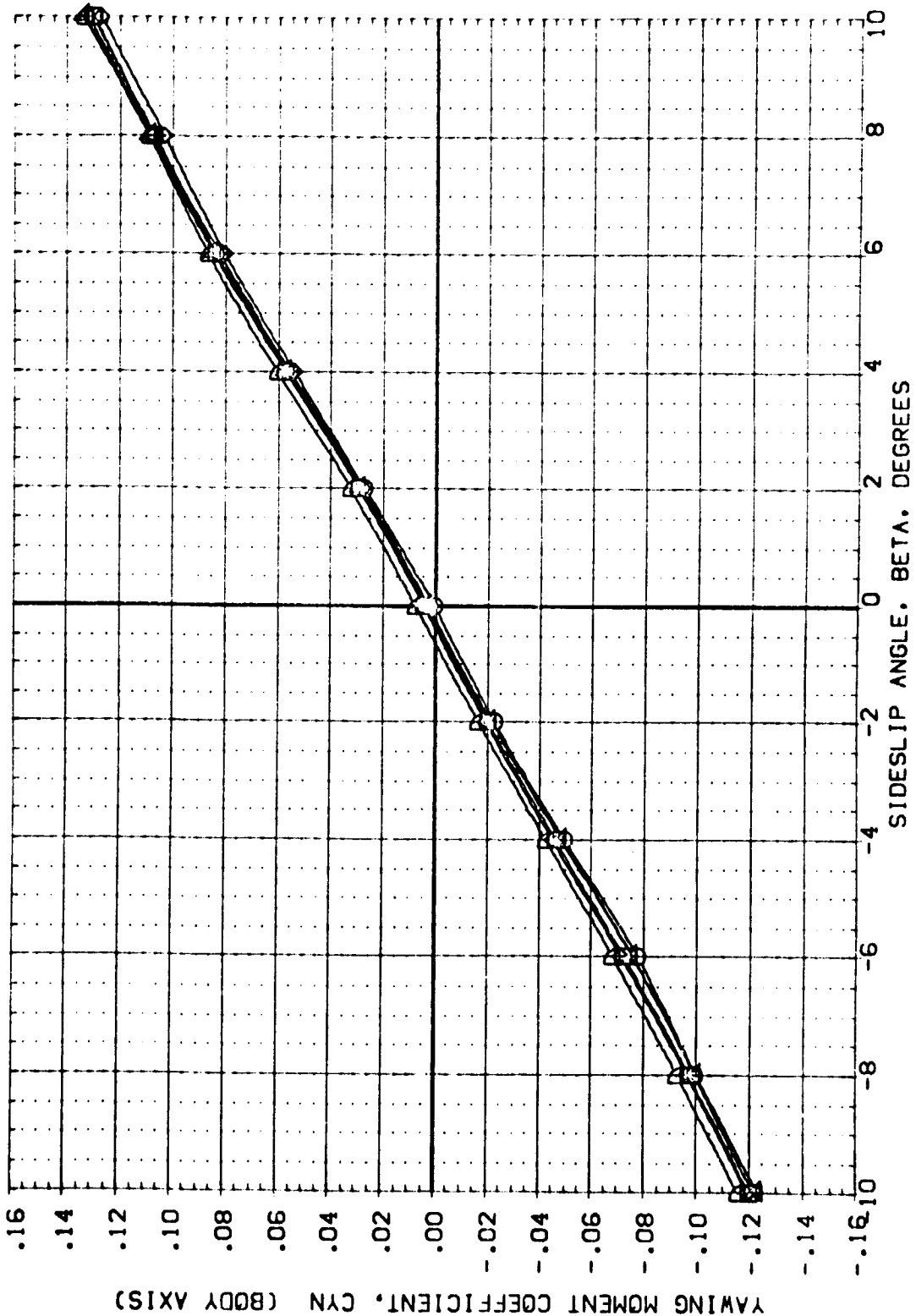
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(AB3008)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	SREF 6.1980 SQ. IN
(AB3009)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(AB3010)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.140	BREF 5.3130 IN.
(AB3011)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.280	XMRP 2.5450 IN.
(AB3012)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-.500	.280	YMRP .0000 IN.
(AB3013)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(B)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[A83008]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.140	SREF 6.1980
[A83009]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.140	LREF 5.3130
[A83010]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.140	BREF 5.3130
[A83011]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.280	YMRP 2.5490
[A83012]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.280	ZMRP .0000
[A83013]	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	5.000	-500	.280	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/([S3/2])/([S3/2])

(C)MACH = 1.25

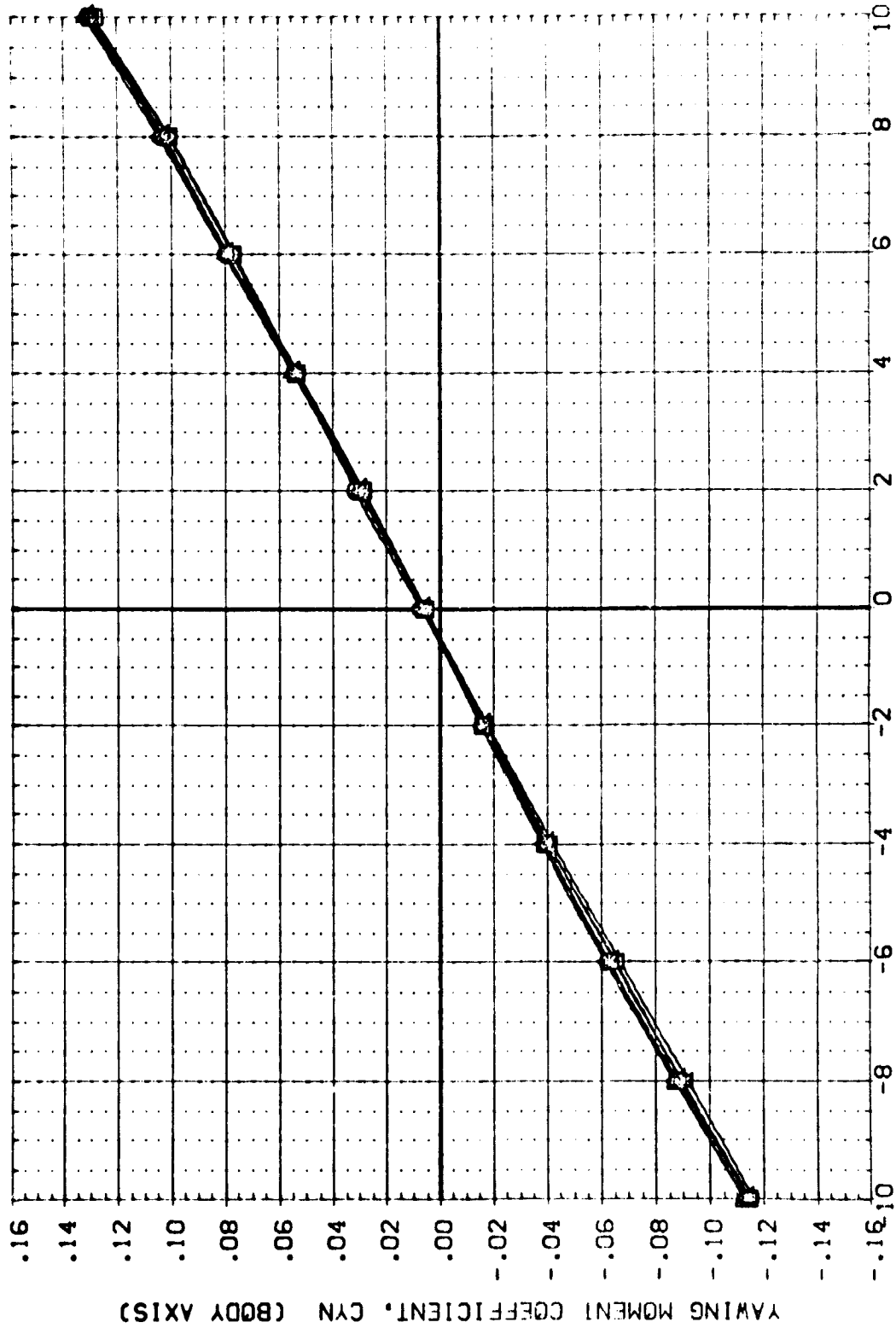
PAGE

65

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A83008)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)
(A83009)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)
(A83010)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)
(A83011)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)
(A83012)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)
(A83013)	MSFC 570(IA3IF)(Q3)/(T9)/(S3/2)/(S3/2)

ALPHA	ORBITAL	DELTA Z
5.000	-500	.140
5.000	500	.140
5.000	1500	.140
5.000	-500	.280
5.000	500	.280
5.000	1500	.280

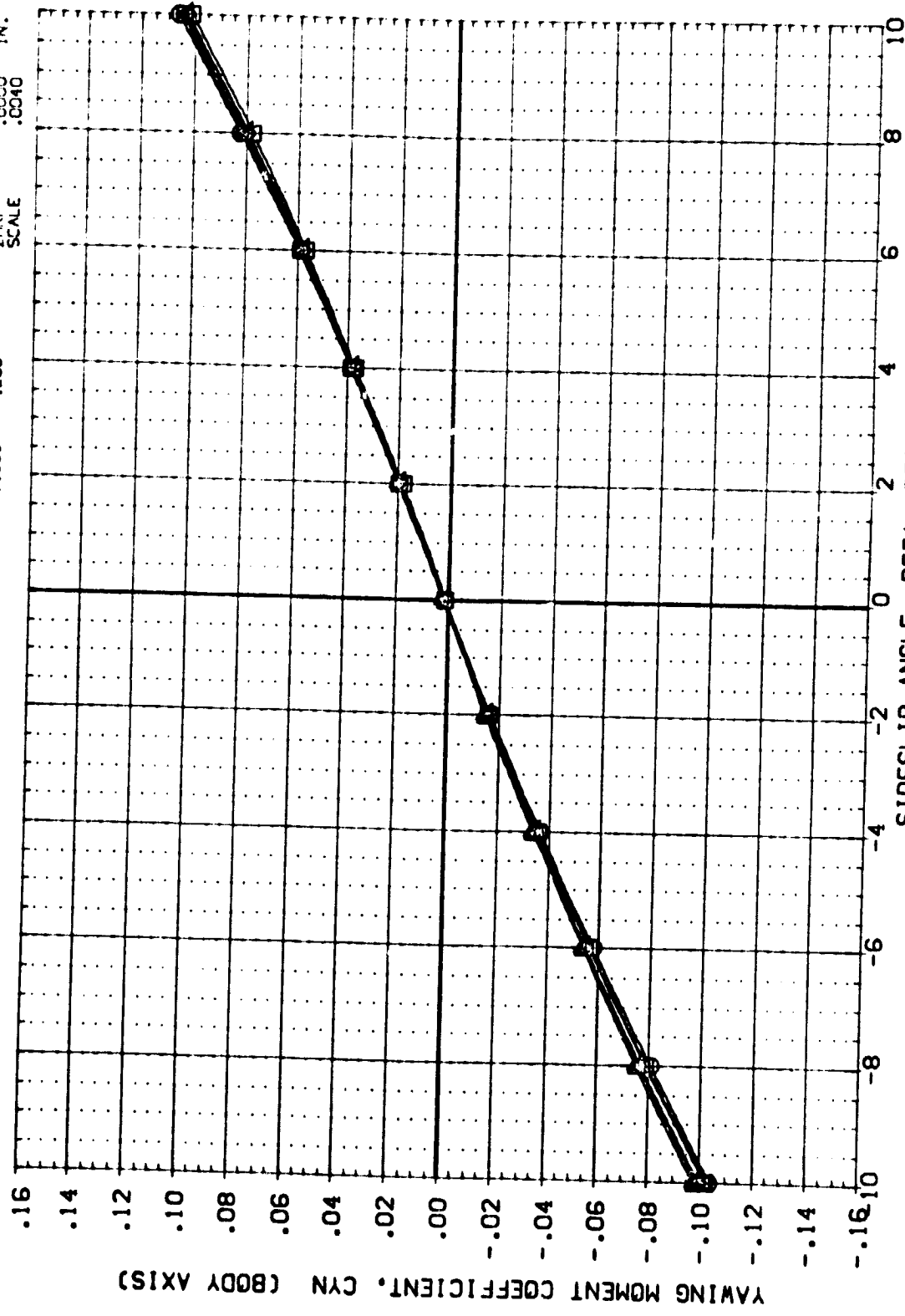
REFERENCE INFORMATION	
SREF	6.1980 SQ. IN
LREF	5.3130 IN
BREF	5.3130 IN
XMRP	2.5490 IN
YMRP	.0000 IN
ZMRP	.0000 IN
SCALE	.0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(O)MACH = 1.46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.140	SREF 6.1980 SO. IN
(A83009)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.140	LREF 5.3130 IN.
(A83010)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83011)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.280	XMRP 2.5490 IN.
(A83012)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	- .500	.280	ZMRP .0000 IN.
(A83013)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1.500	.280	SCALE .0040 IN.



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$
 (E)MACH = 2.99

DATA SET SYMBOL CONFIGURATION DESCRIPTION

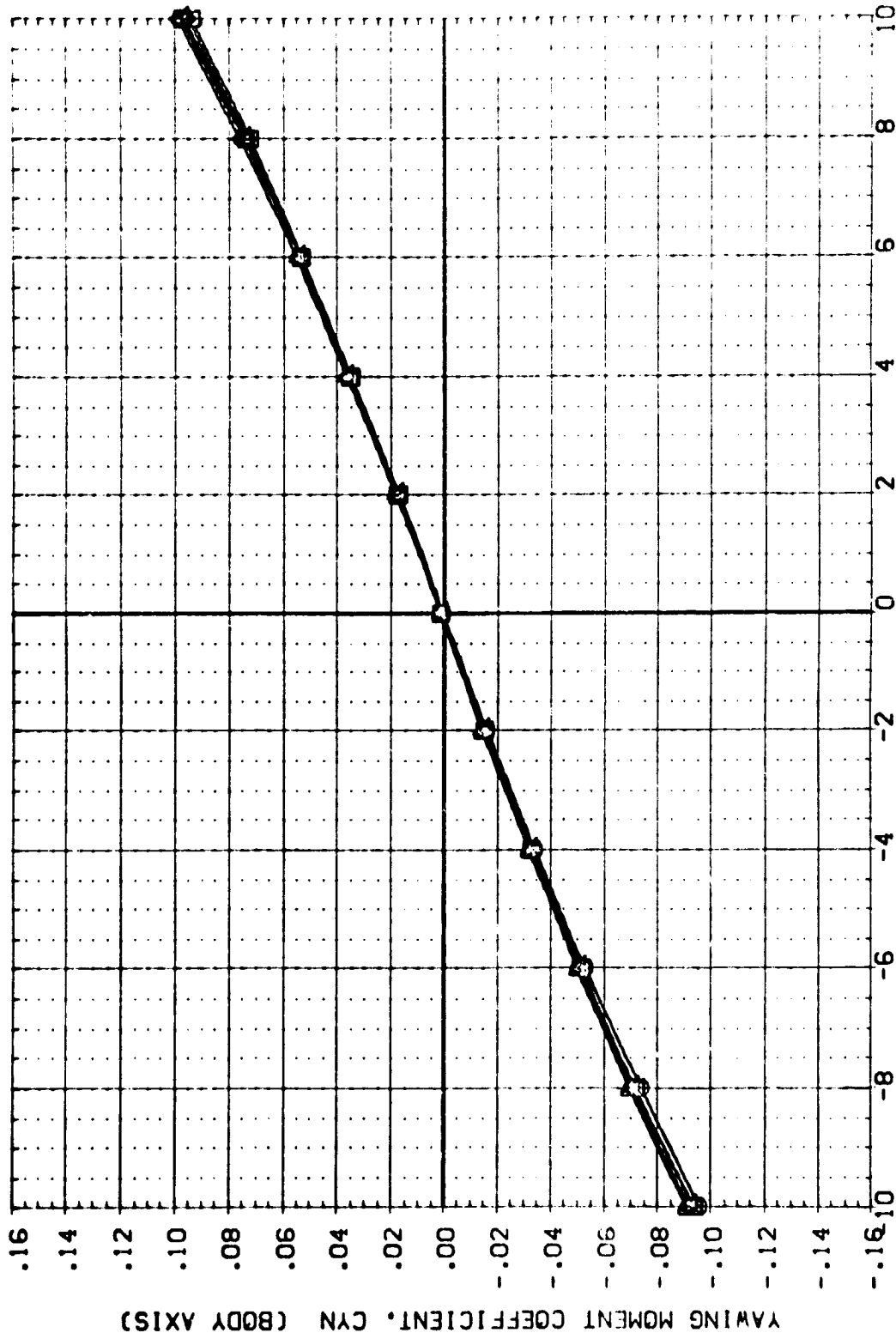
(A83008)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83009)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83010)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83011)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83012)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83013)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))

ALPHA ORBITAL DELTA Z

5.000	-500	.140
5.000	-500	.140
5.000	-500	.140
5.000	-500	.280
5.000	-500	.280
5.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO	N
LREF	5.3130	IN	N
BREF	5.3130	IN	N
XMRP	2.5450	IN	N
YMRP	.0000	IN	N
ZMRP	.0000	IN	N
SCALE	.0010		









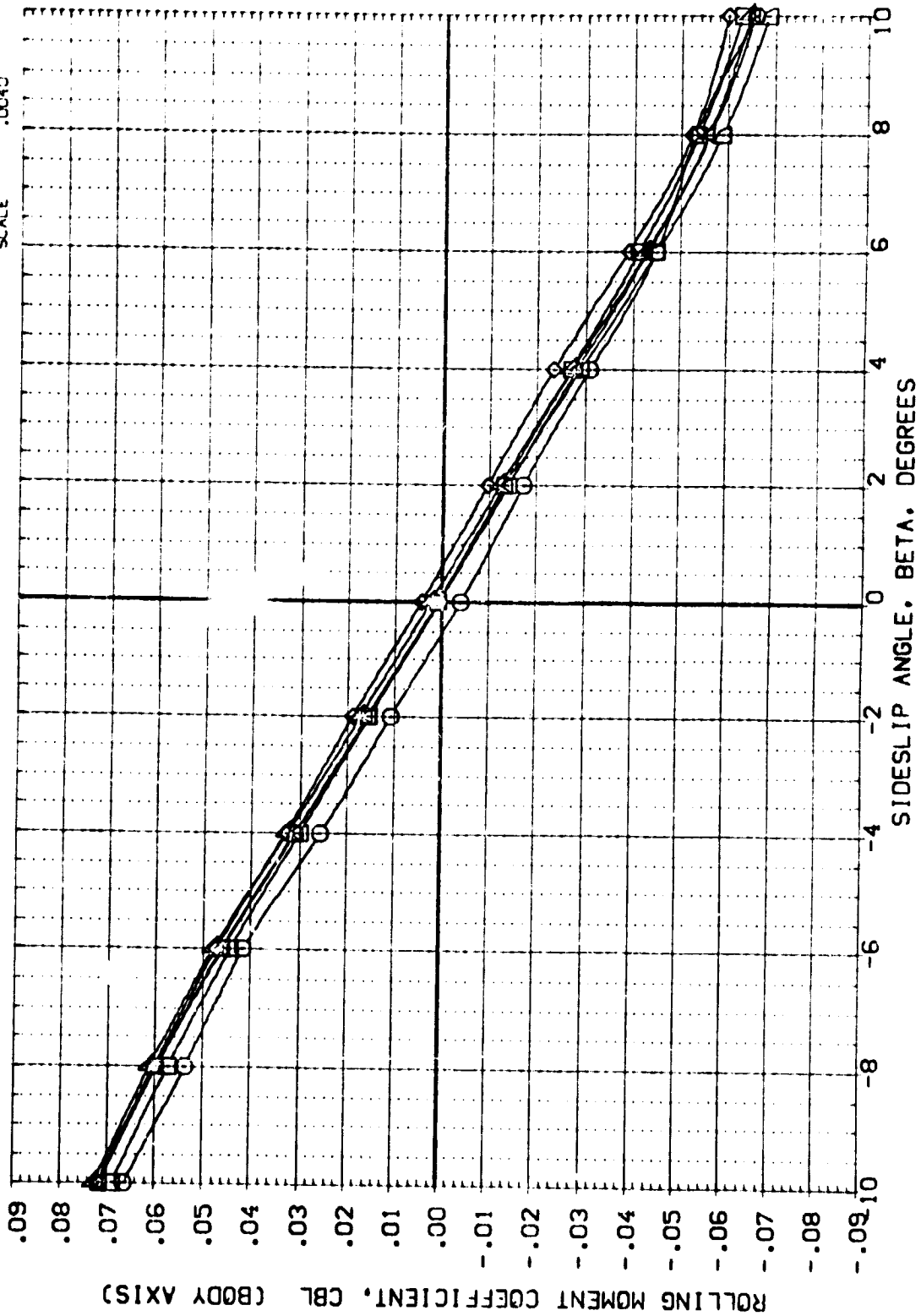
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(F)MACH = 3.48

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83008)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 SQ. IN
(A83009)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130 IN
(A83010)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	BREF 5.3130 IN
(A83011)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490
(A83012)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000
(A83013)		MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP .0000
						SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(A)MACH = .90

DATA SET SYMBOL CONFIGURATION DESCRIPTION

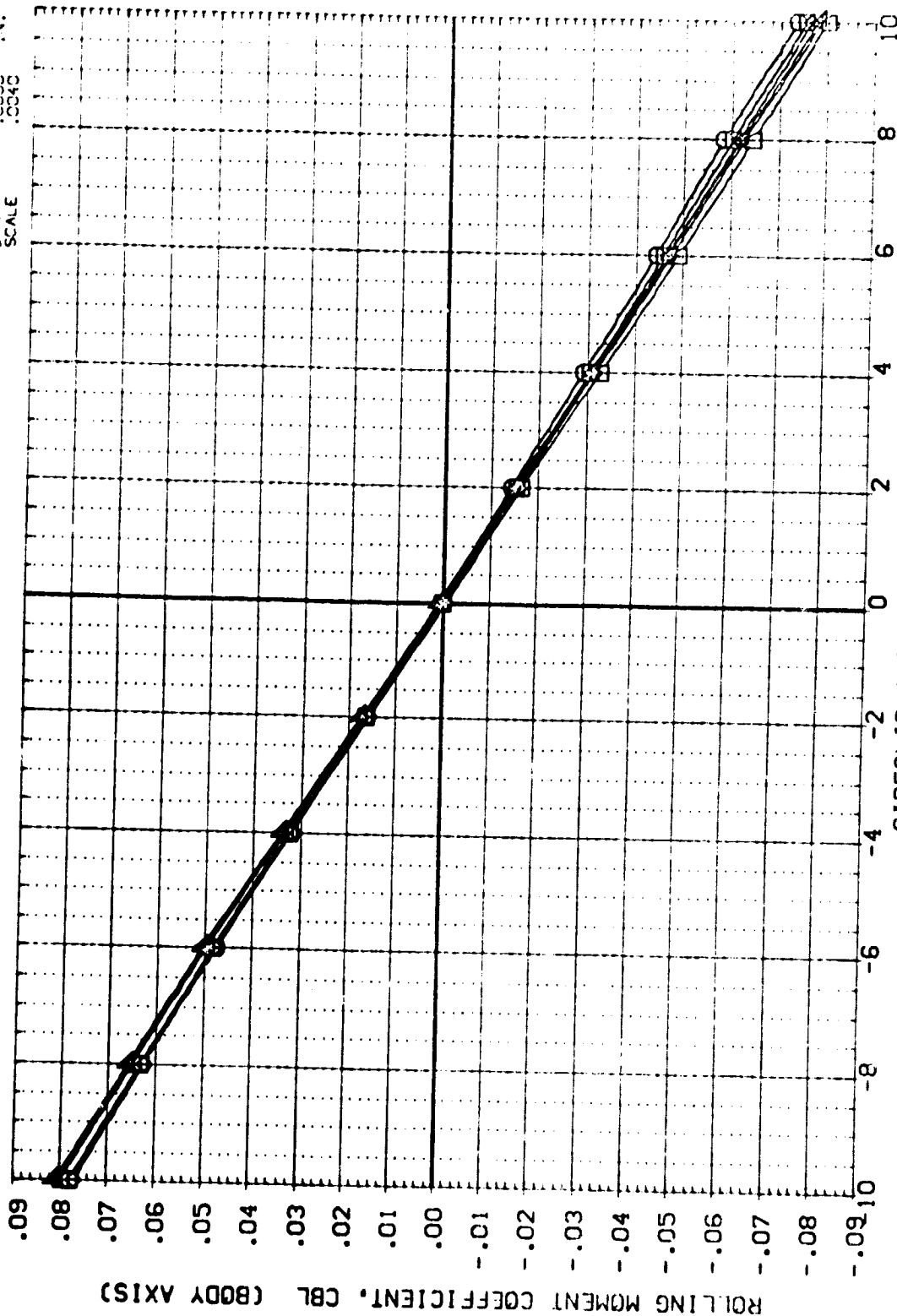
(A83008)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83009)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83010)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83011)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83012)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83013)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBIT INC DELTA Z

5.000	-500	.140
5.000	-500	.140
5.000	1.500	.140
5.000	-500	.280
5.000	-500	.280
5.000	1.500	.280

REFERENCE INFORMATION

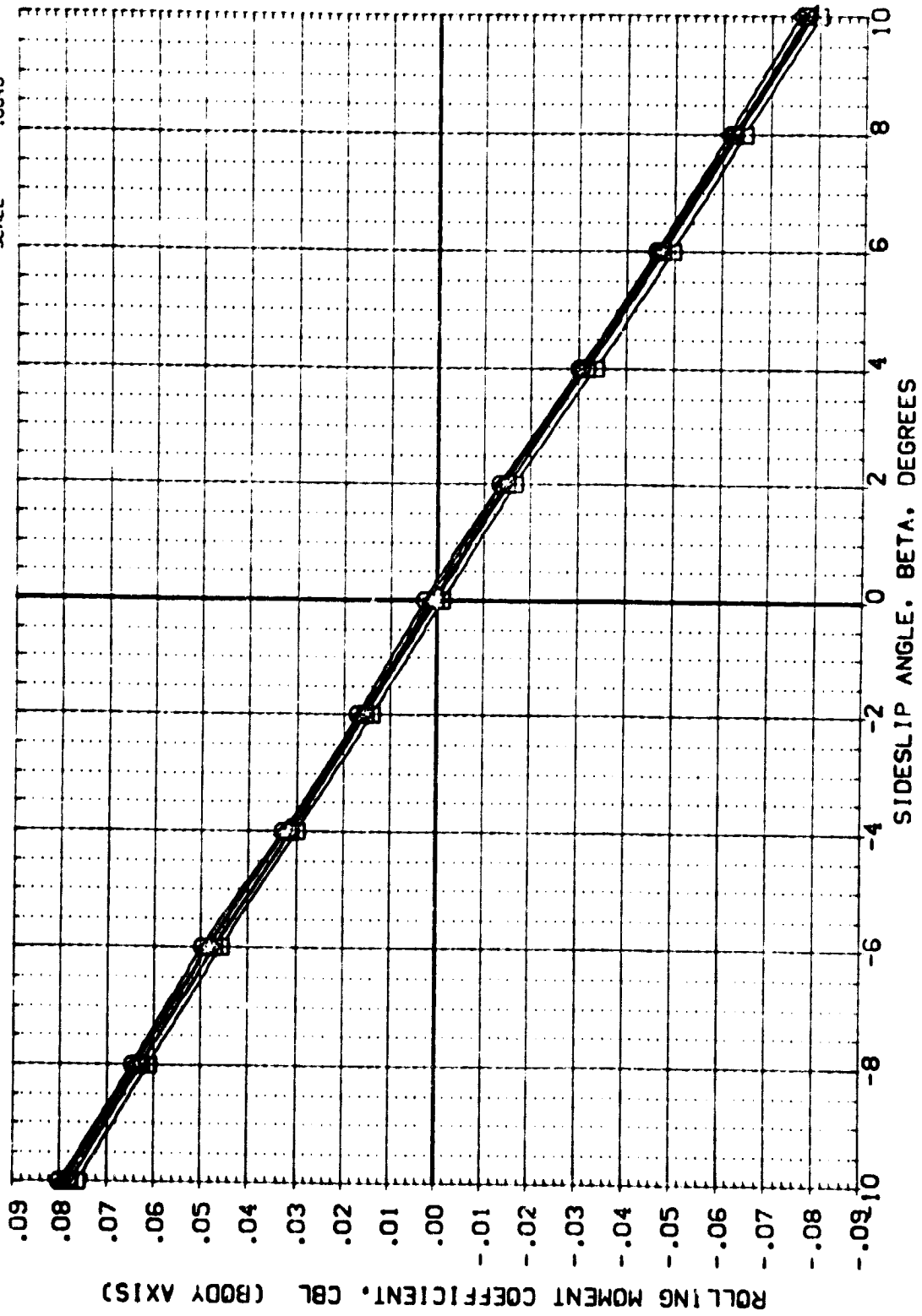
SREF	6.1980	50. IN
LREF	5.3130	IN
BREF	5.3130	IN
YMRP	2.5490	IN
ZMRP	.0000	IN
SCALE	.0040	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(B)MACH = 1.05

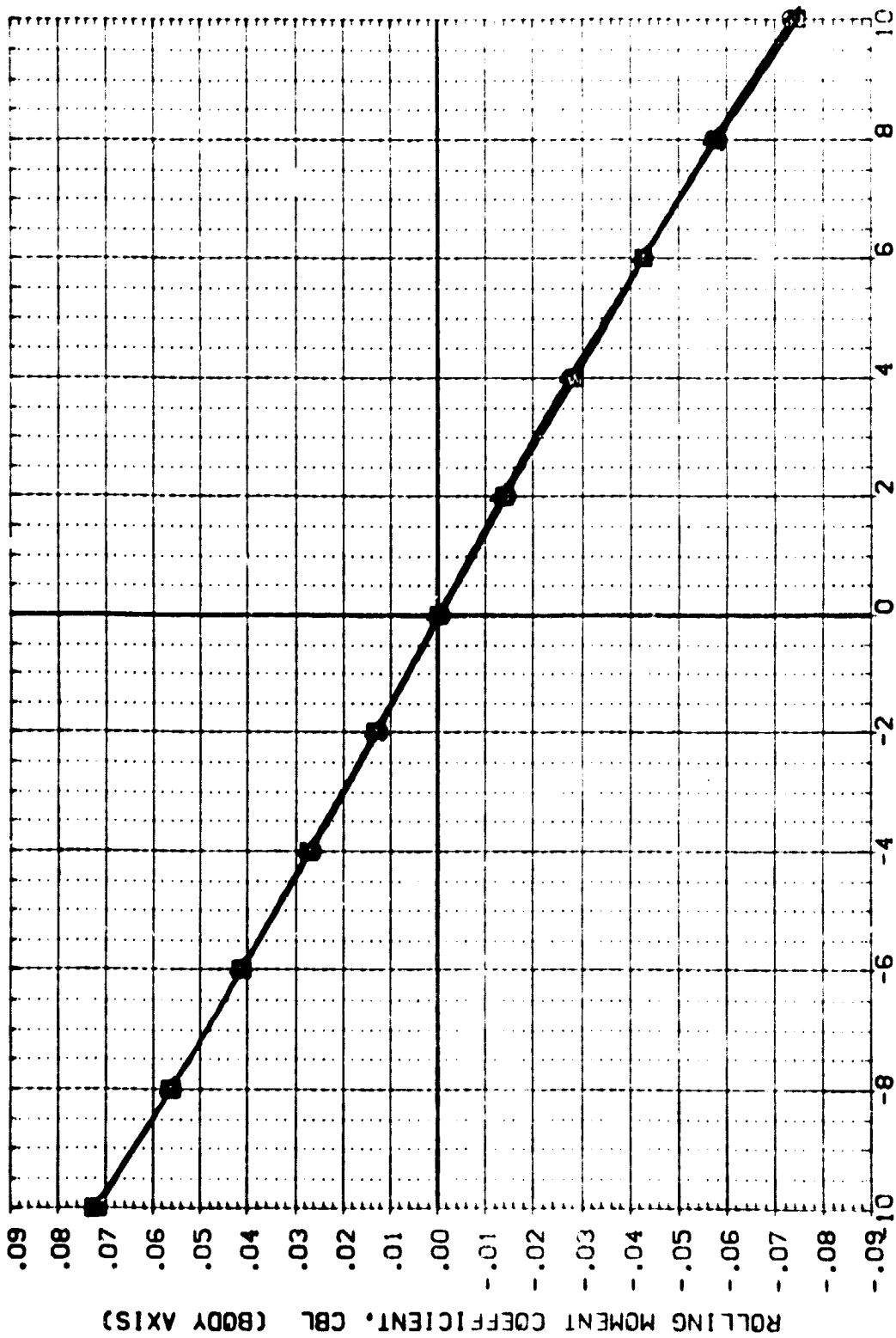
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 SQ IN
(A83009)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130 IN
(A83010)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1500	.140	BRF 5.3130 IN
(A83011)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5450 IN
(A83012)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000 IN
(A83013)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	5.000	1500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(C)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
[A83008]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 S2 IN
[A83009]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130
[A83010]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	1500	.140	BREF 5.3130
[A83011]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490
[A83012]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000
[A83013]	MSFC 5701(A31F)(031)/(T91)/(S3/2)/(S3/2)	5.000	1500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

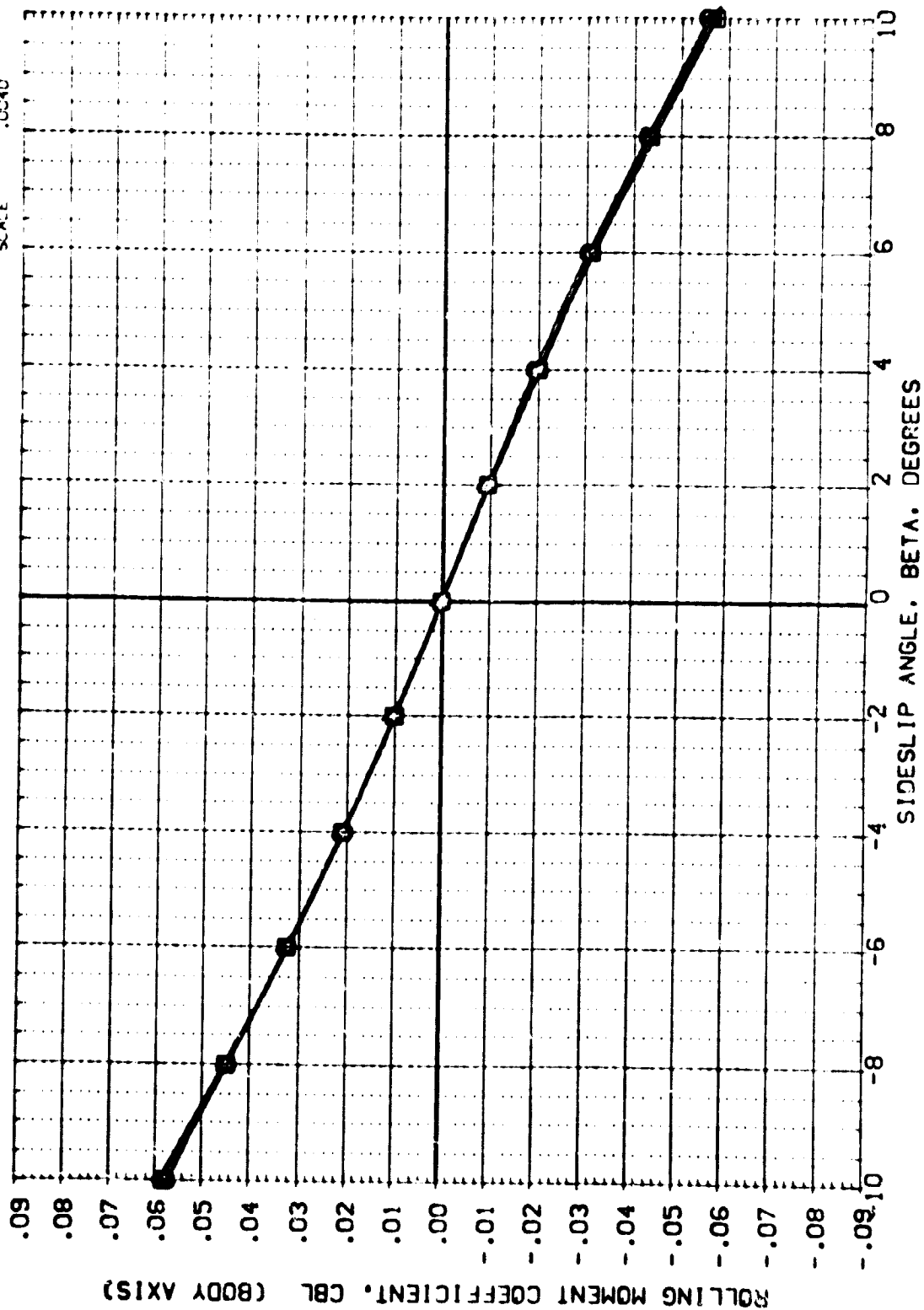
(A83008)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83009)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83010)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83011)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83012)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83013)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBITAL C DELTA Z

5.000	-500	.140
5.000	-500	.140
5.000	-500	.140
5.000	-500	.280
5.000	-500	.280
5.000	-500	.280

REFERENCE INFORMATION

SREF	5.1980	S2	IN
LREF	5.3130		
BREF	5.3130		
XREF	2.5490		
YREF	.0000		
ZREF	.0000		
SCALE	.0040		



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(C)MACH = 2.99

DATA SET SYMBOL CONFIGURATION DESCRIPTION

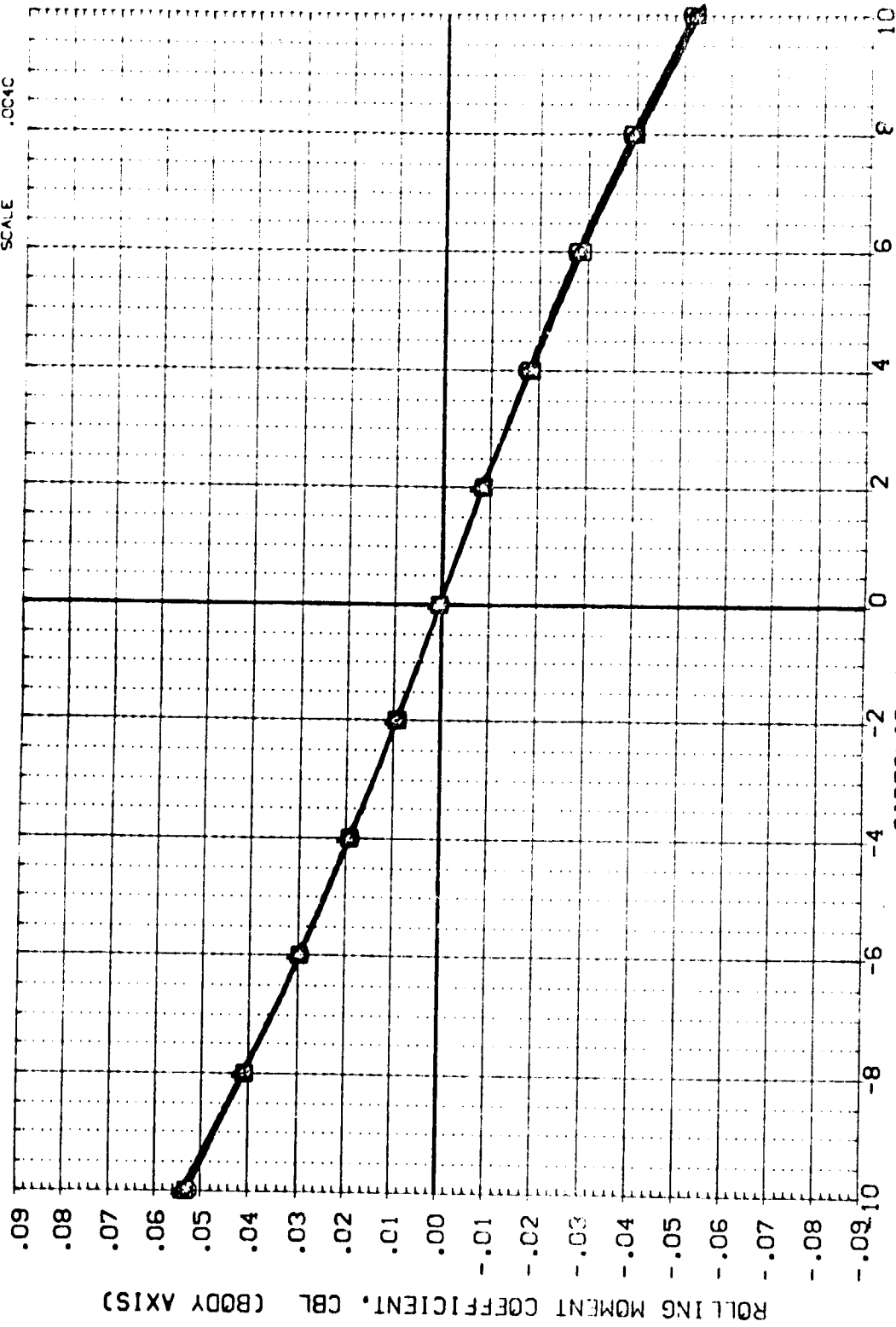
(A83008)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(A83009)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(A83010)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(A83011)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(A83012)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(A83013)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))

ALPHA ORBINC DELTAZ

5.000	-.500	.140
5.000	.500	.140
5.000	1.500	.280
5.000	-1.500	.280
5.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1580	SG	IN
LREF	5.3130		
BREF	5.3130		
XMRP	2.5420		
YMRP	.0000		
ZMRP	.0000		
SCALE	.0040		

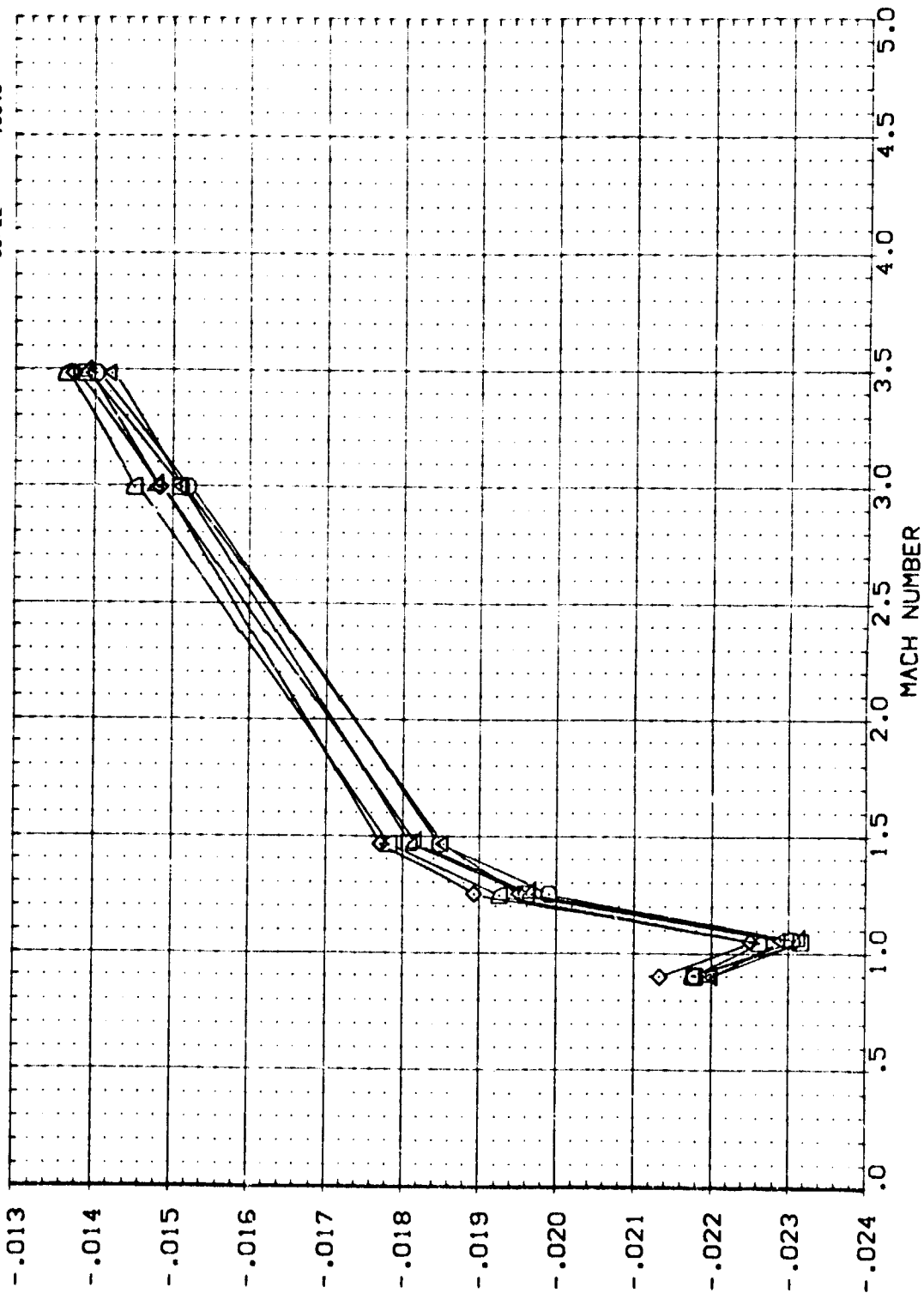


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(F)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION	SO. IN
(A83008)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	-500	.140	SREF	5.1980
(A83009)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	-500	.140	LREF	5.3130
(A83010)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	-500	.140	BREF	5.3130
(A83011)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	-500	.280	XMRP	2.5490
(A83012)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	-500	.280	YMRP	.0000
(A83013)	MSFC 570((IA3IF)(03)/((T9)/((S3/2)/(S3/2))	5.000	1500	.280	ZMRP	.0000
					SCALE	.0040

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2)/(S3/2))

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AB3008)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(AB3009)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(AB3010)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(AB3011)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(AB3012)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))
(AB3013)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))

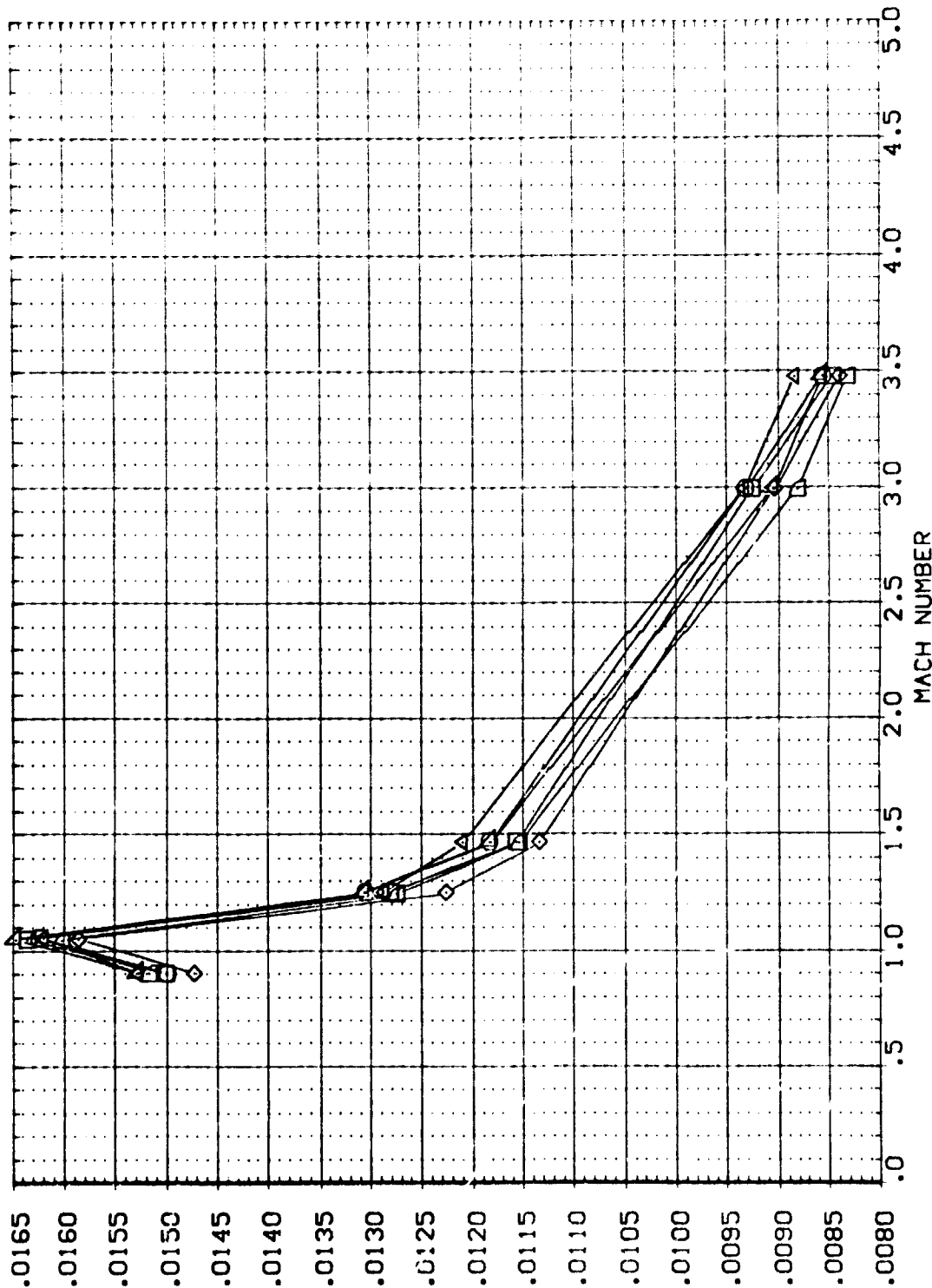
ALPHA ORBITAL DELTA Z

5.000	-500	.140
5.000	-500	.140
5.000	-500	.140
5.000	-500	.280
5.000	-500	.280
5.000	-500	.280

REFERENCE INFORMATION

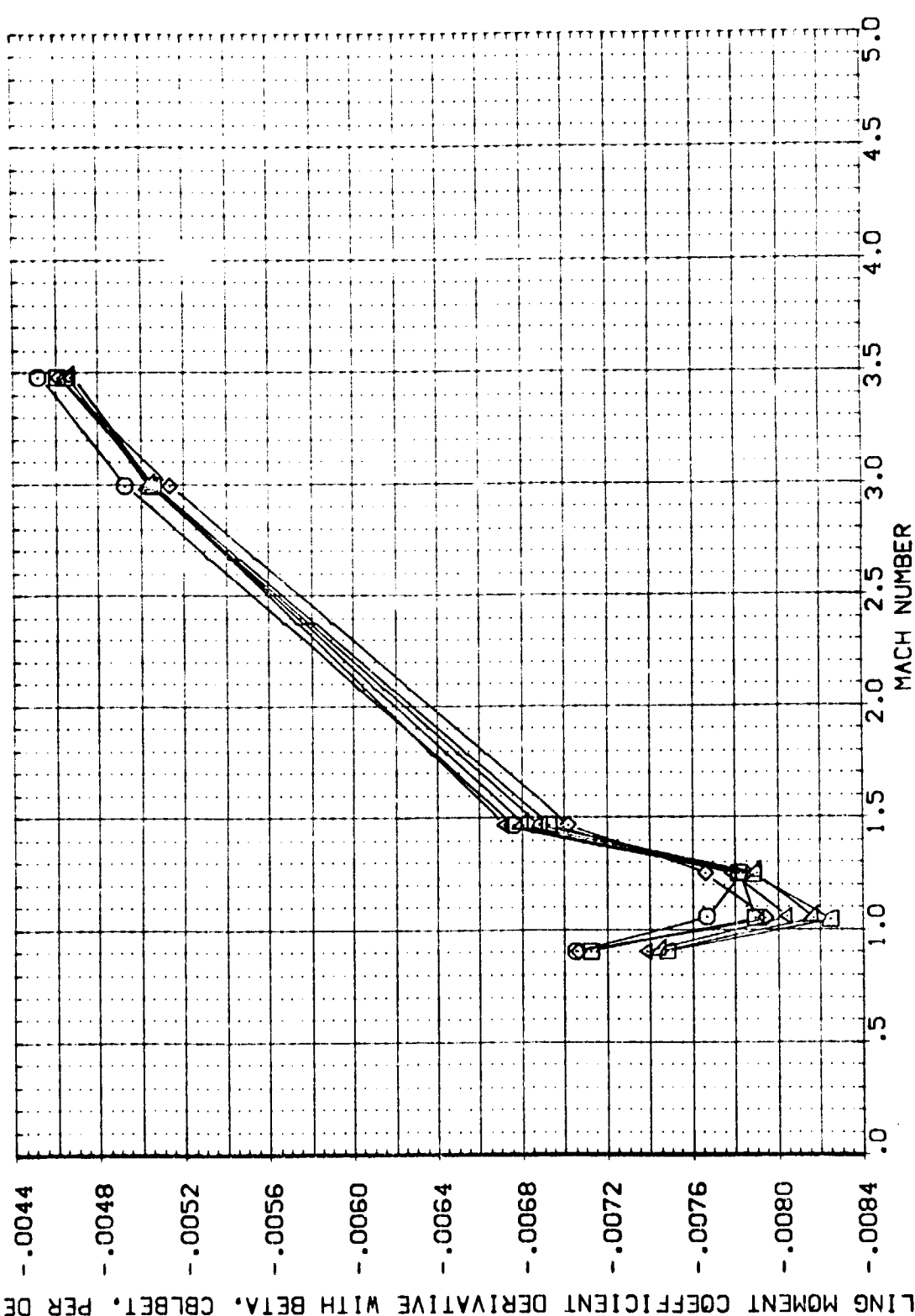
SREF	6.1980	50. IN
LREF	5.3130	N.
BREF	5.3130	N.
YMRP	2.5450	N.
ZMRP	.0000	N.
SCALE	.0040	N.

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2))/((S3/2))

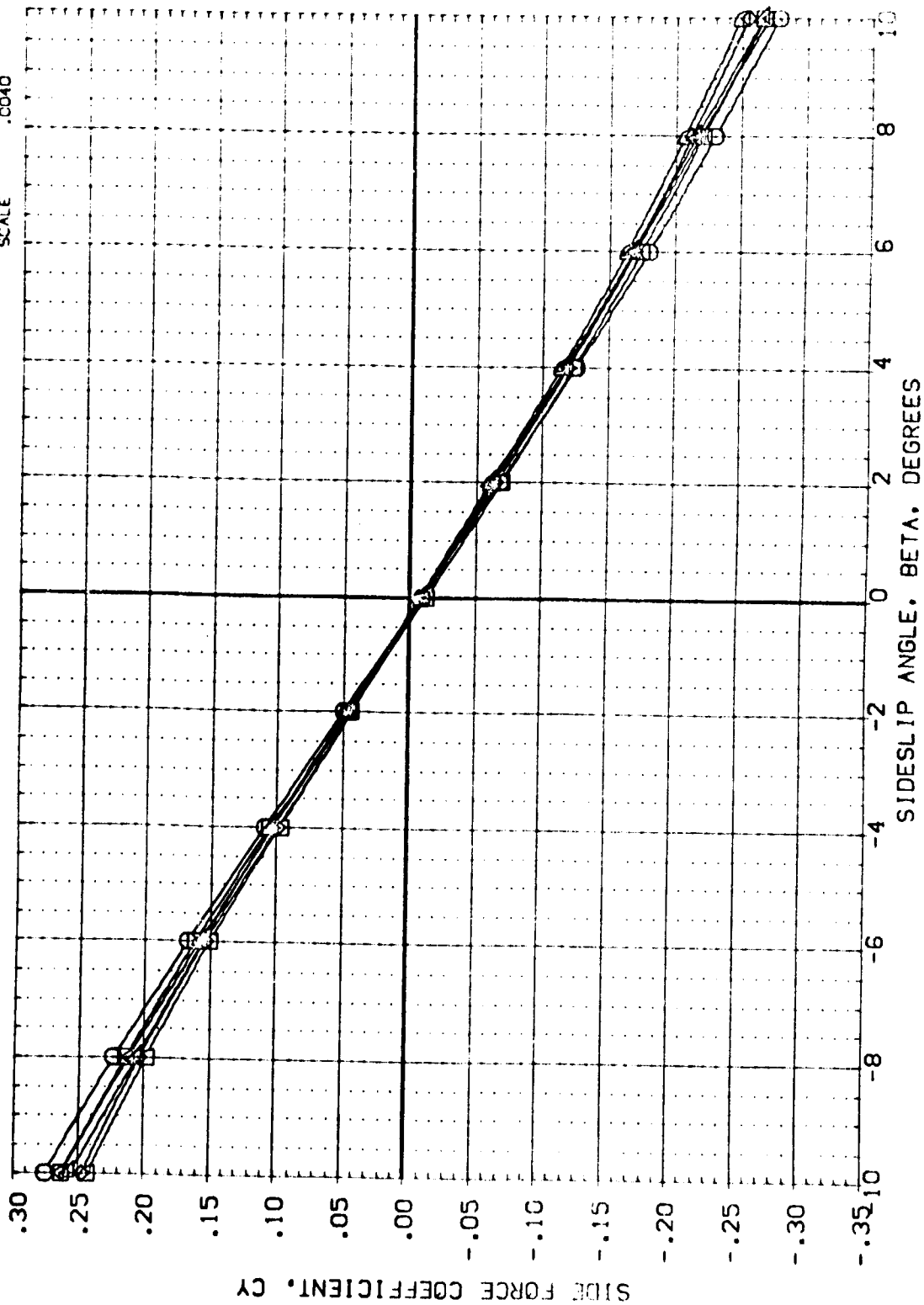
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83008)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	- .500	.140	SREF 6.1980
(A83009)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	- .500	.140	LREF 5.3130
(A83010)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	1.500	.140	BREF 5.3130
(A83011)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	- .500	.280	XMRP 2.5490
(A83012)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	- .500	.280	YMRP .0000
(A83013)	MSFC 570((A3:F)(03)/(T9)/(S3/2))/(S3/2)	5.000	1.500	.280	ZMRP .0000
					SCALE .0040



ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

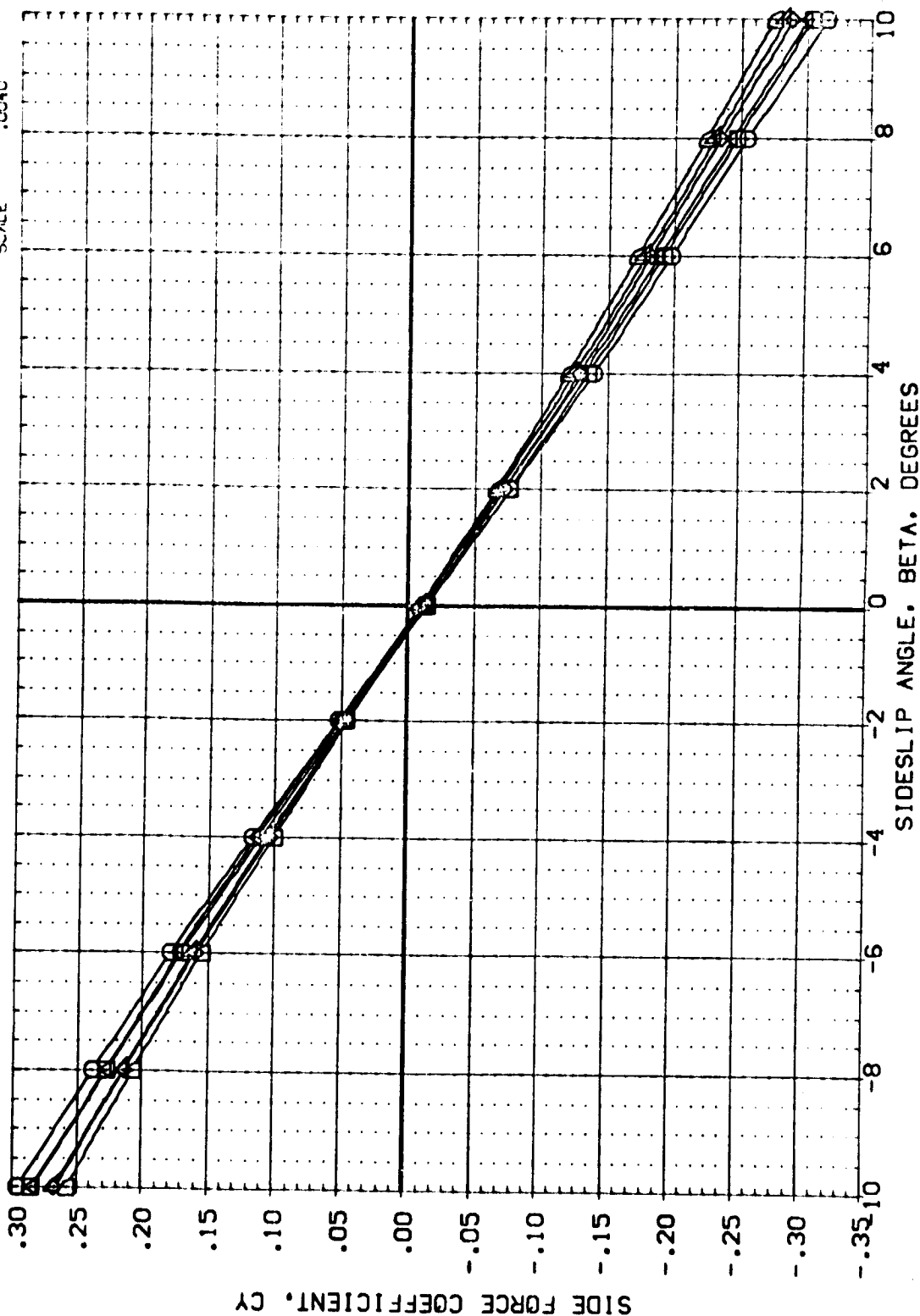
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83015)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP 2.5490 IN.
(A83018)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
(A83019)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(M)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 5.1980 SO. IN
(A83015)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	1.500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5450 IN.
(A83018)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83019)	MSFC 570(I A3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	1.500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION

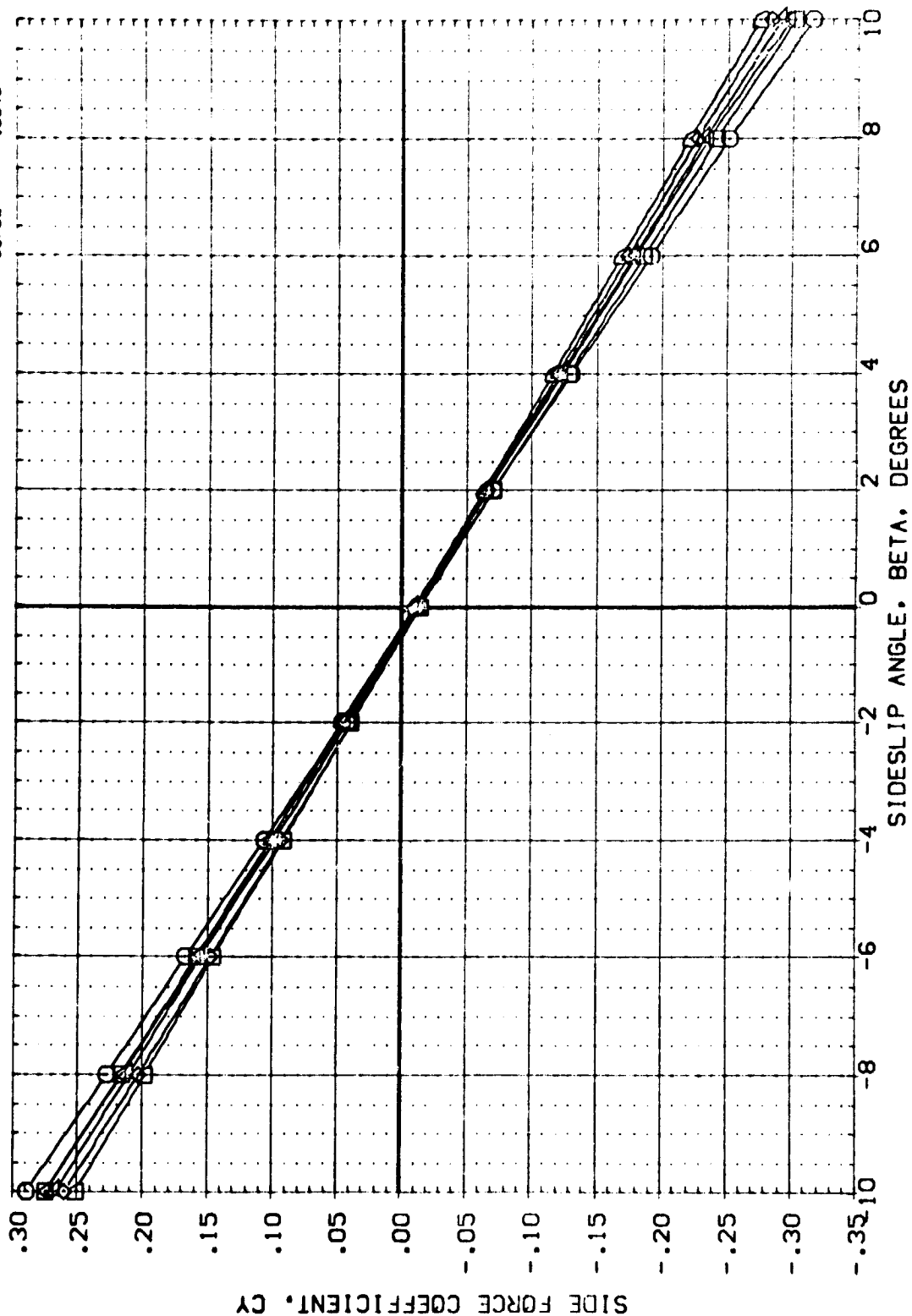
(A83014)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(A83015)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(A83016)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(A83017)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(A83018)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)
(A83019)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBINC DELTAZ

-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140

REFERENCE INFORMATION

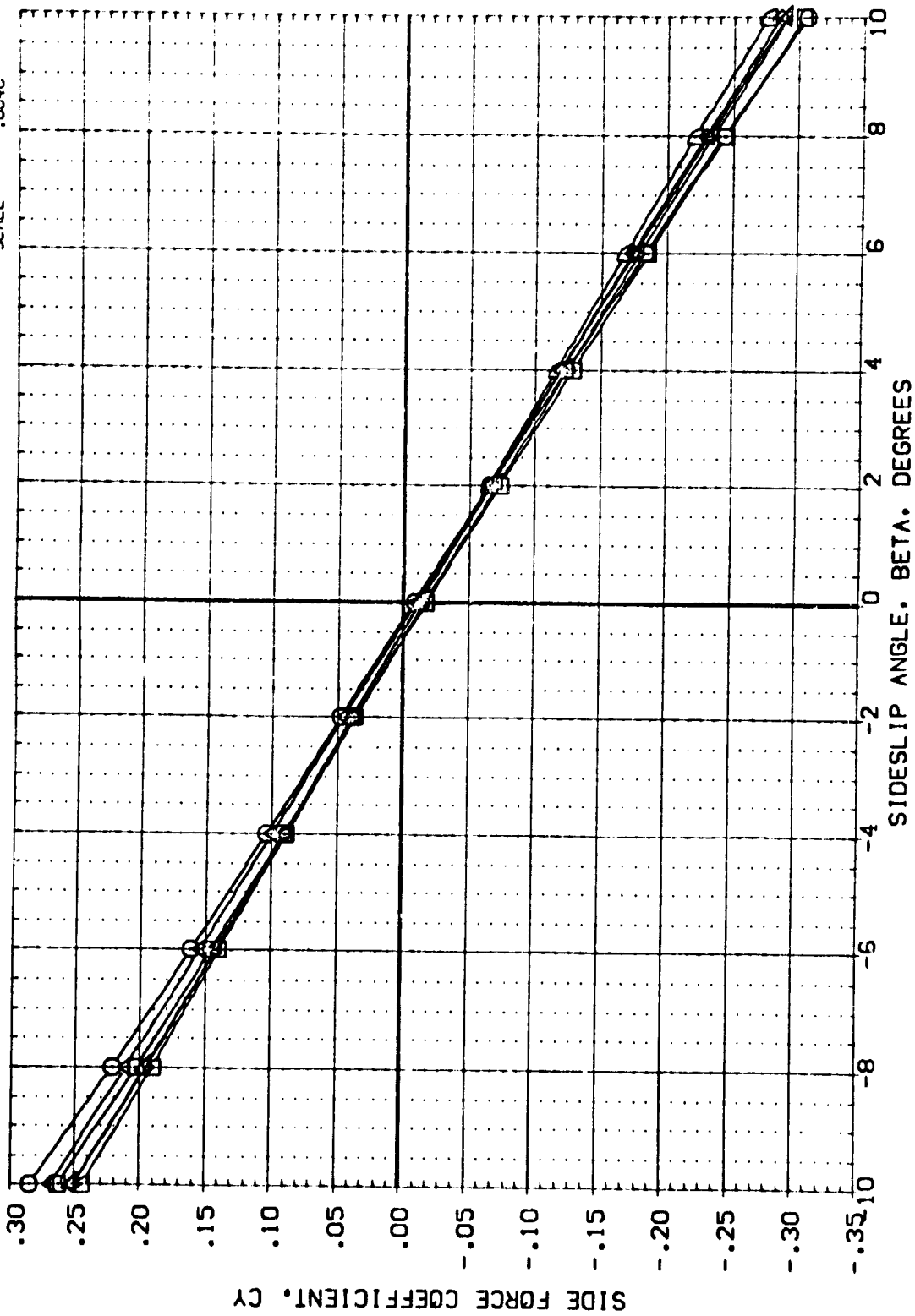
SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRF	2.5490	IN.
YMRF	.0000	IN.
ZMRF	.0000	IN.
SCALE	.0040	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(C)MACH = 1.24

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	SREF 6.1980 SO. IN
(A83015)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	YMRP 2.5480 IN.
(A83018)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	ZMRP .0000 IN.
(A83019)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-1.500	.140	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(D)MACH = 1.47

DATA SET SYMBOL CONFIGURATION DESCRIPTION

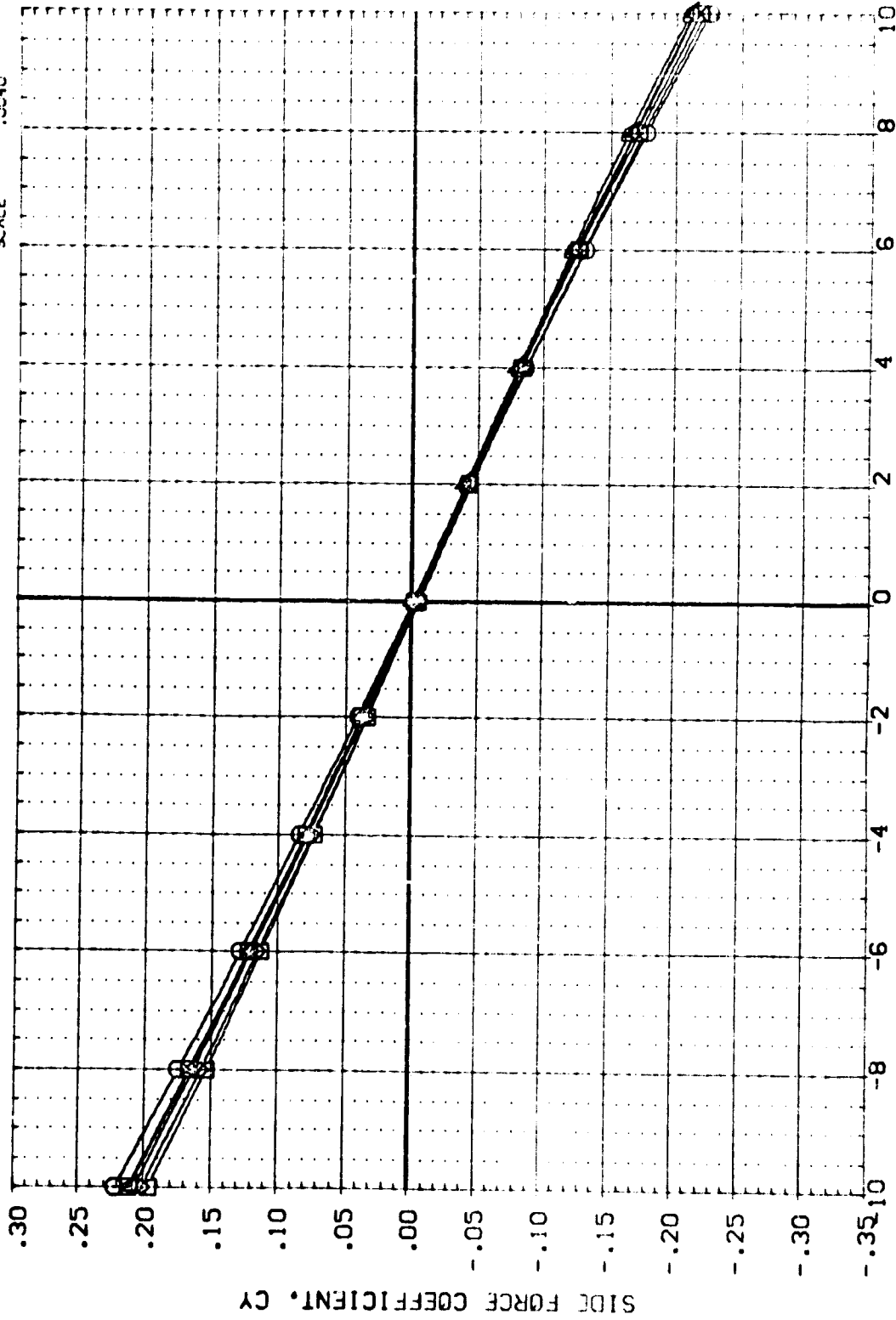
(A83014)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83015)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83016)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83017)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83018)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))
(A83019)	MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2))

ALPHA ORBITAL DELTA Z

-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140
-5.000	-5.000	.140

REFERENCE INFORMATION

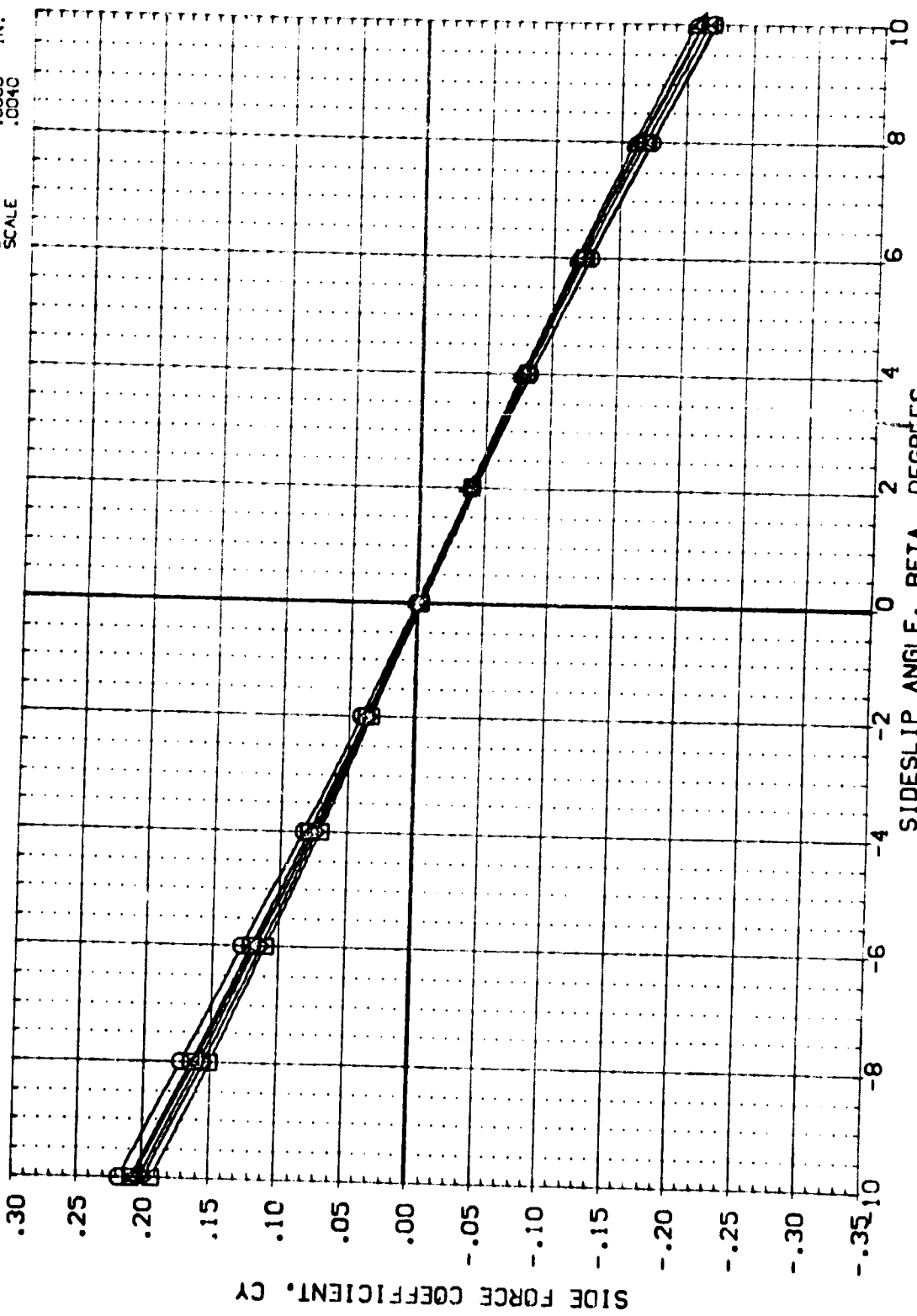
SREF	6.1980	SO	N
LREF	5.3130	IN	N
BREF	5.3130	IN	N
XMRP	2.5490	IN	N
YMRP	.0000	IN	N
ZMRP	.0000	IN	N
SCALE	.0010		



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83015)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	YMRP 2.5490 IN.
(A83018)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
(A83019)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)	-5.000	-500	.140	SCALE .0040



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83014)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83015)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83016)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83017)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83018)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83019)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

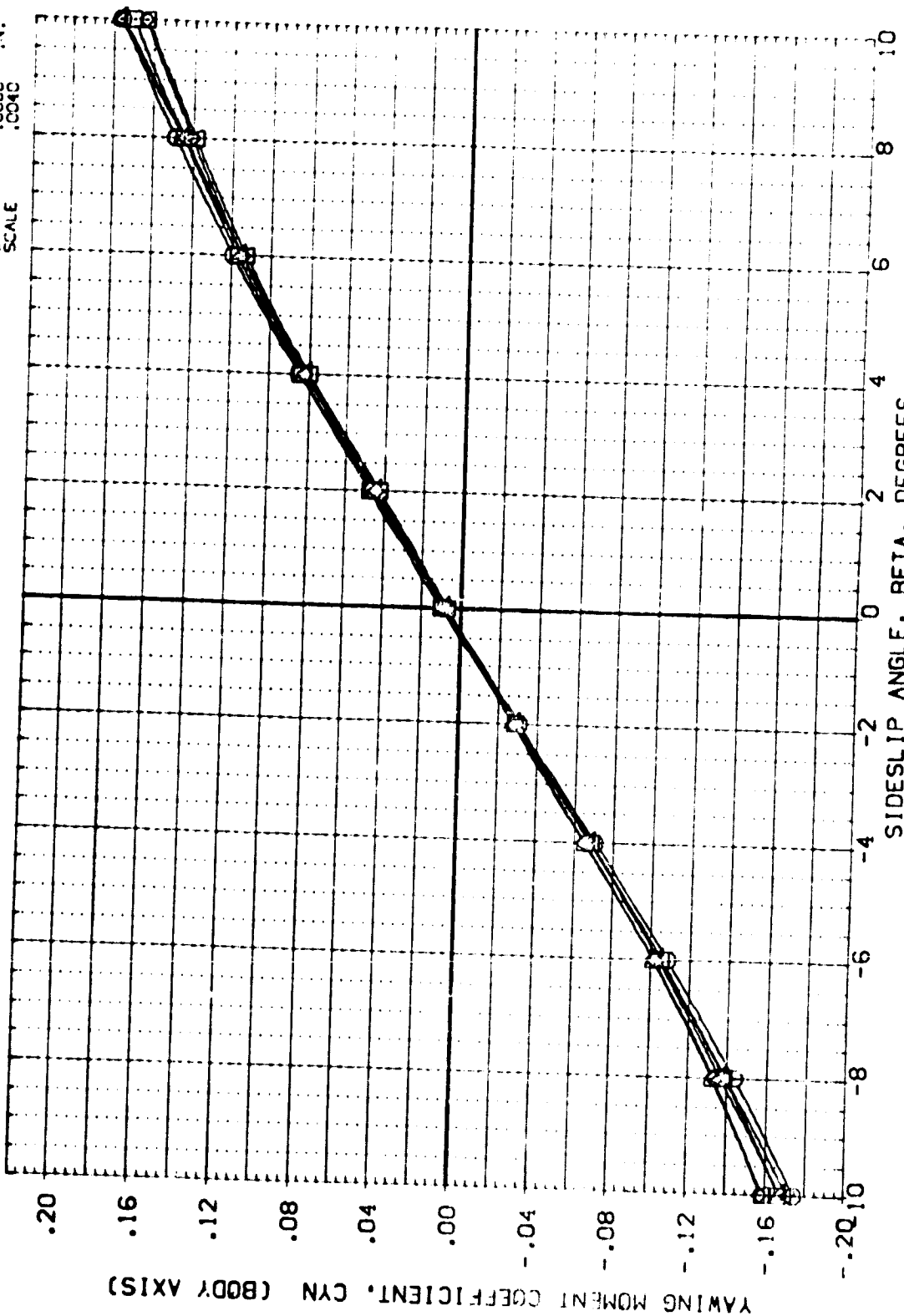
ALPHA
-5.000
-5.000
-5.000
-5.000
-5.000
-5.000

ORBITAL
-500
-500
-500
-500
-500
-500

DELTA Z
.140
.140
.140
.140
.140
.140

REFERENCE INFORMATION

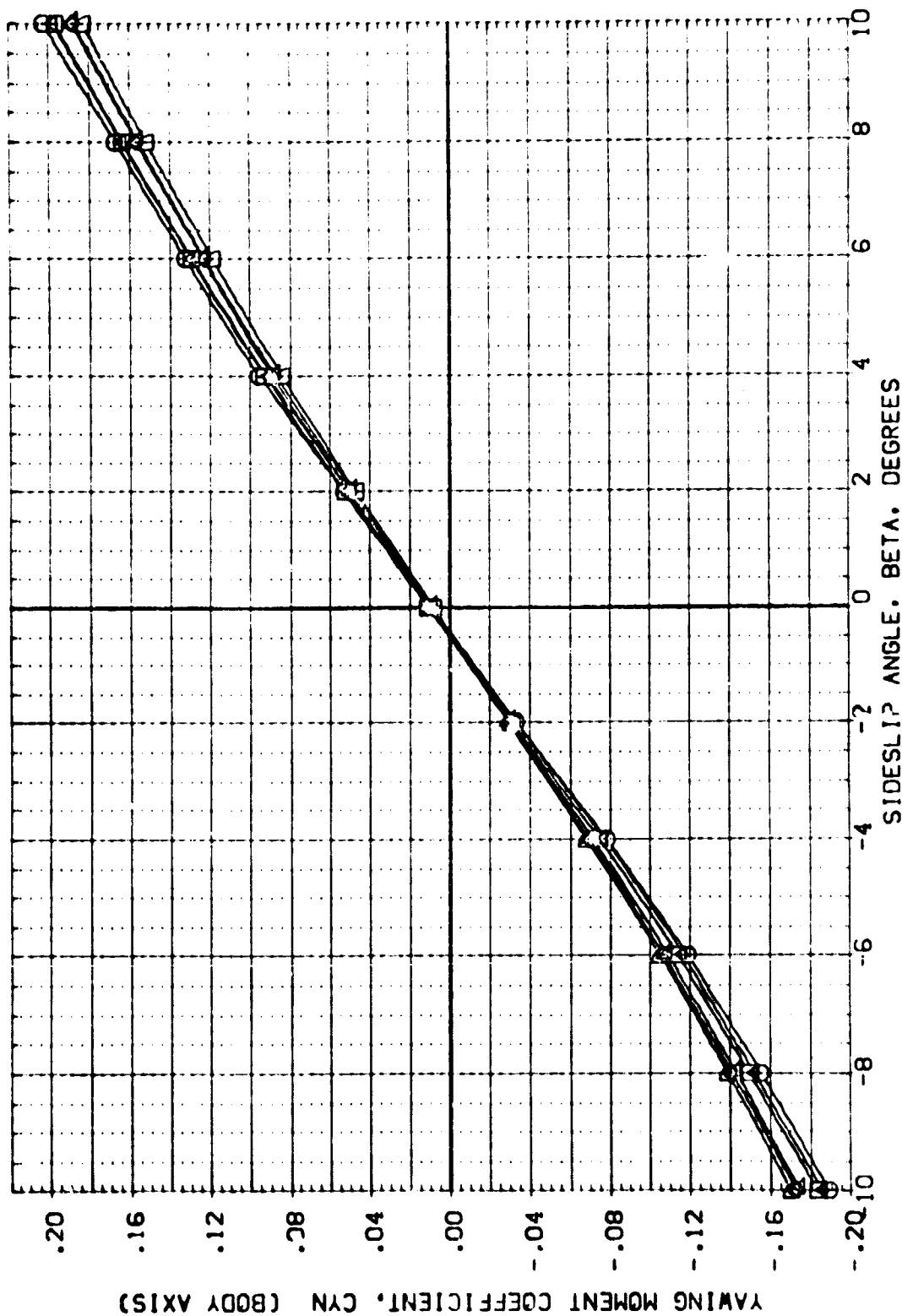
SREF	6.1980	SO	IN
LREF	5.3130		
BREF	5.3130		
YMRP	2.5450		
ZMRP	.0000		
SCALE	.0040		



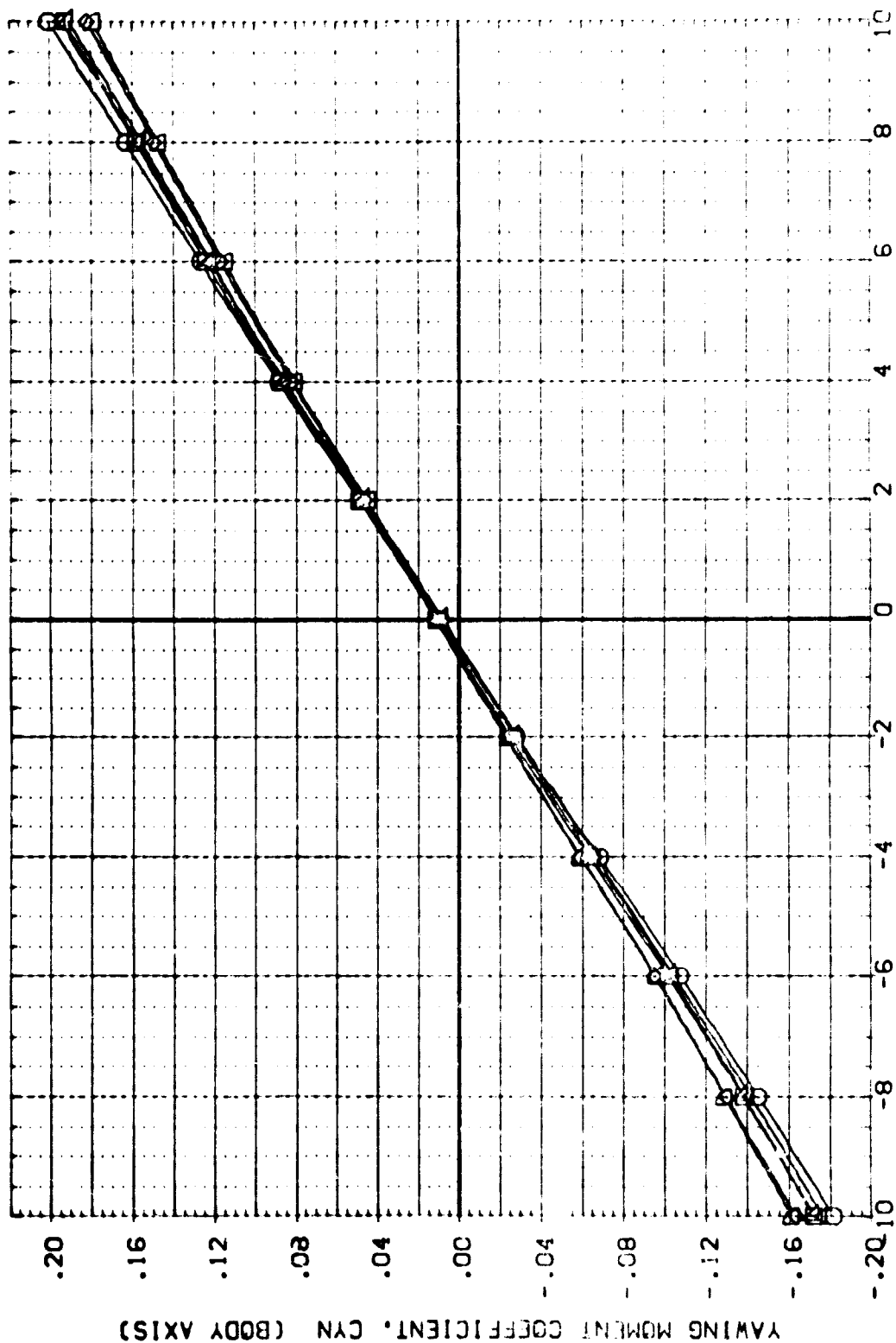
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(A)MACH = .90

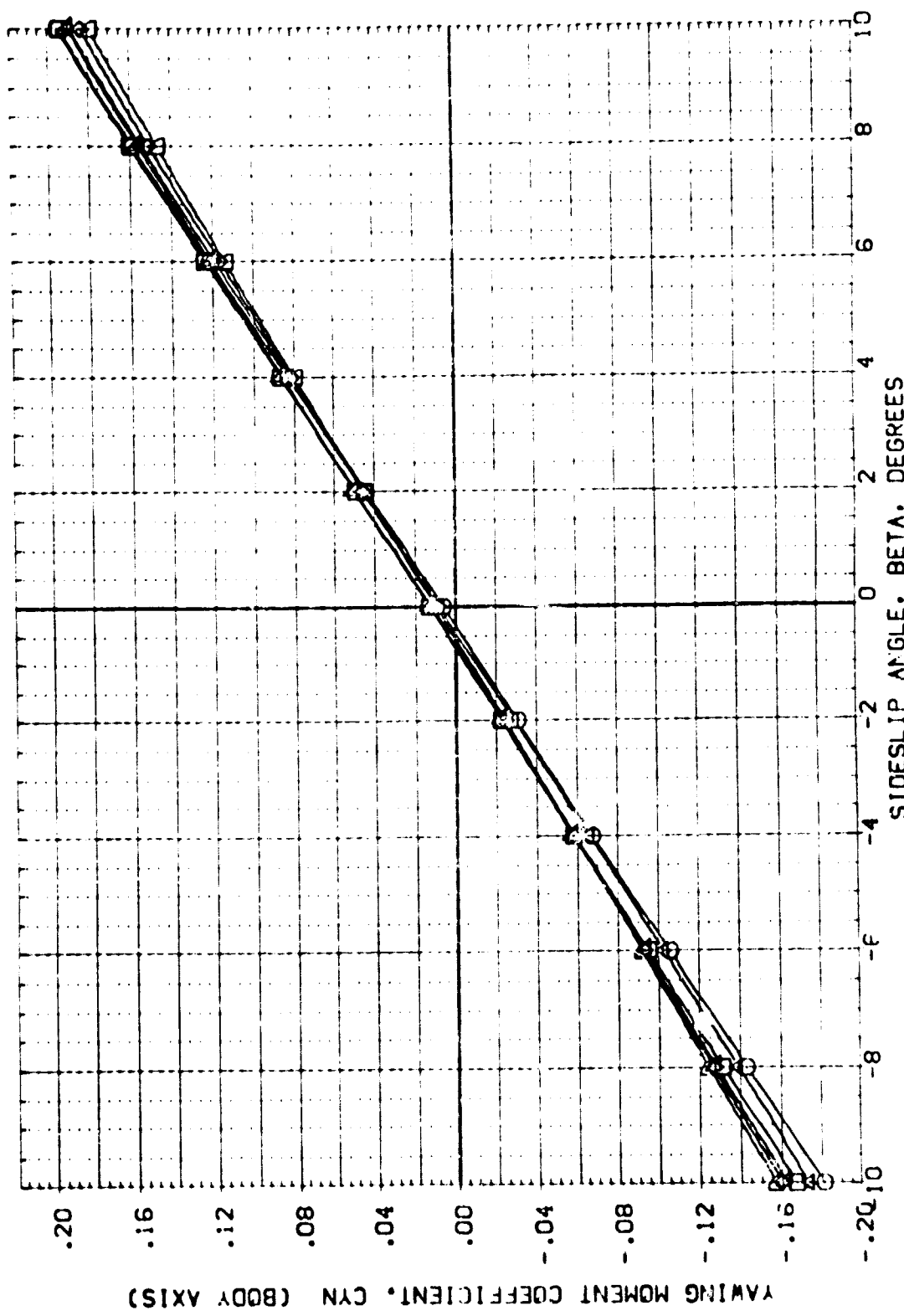
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83015)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	LREF 5.3130
(A83016)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	BREF 5.3130
(A83017)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	YMRD 2.5450
(A83018)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	ZMRD .0000
(A83019)	MSFC 570((A31F)(03)/((T9)/(S3/2)/(S3/2))	-5.000	-500	.140	SCALE .0000



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SC. IN
(A83015)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83017)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YREF 2.5490 IN.
(A83018)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XREF .0000 IN.
(A83019)	MSFC S70(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	ZREF .0000 IN.



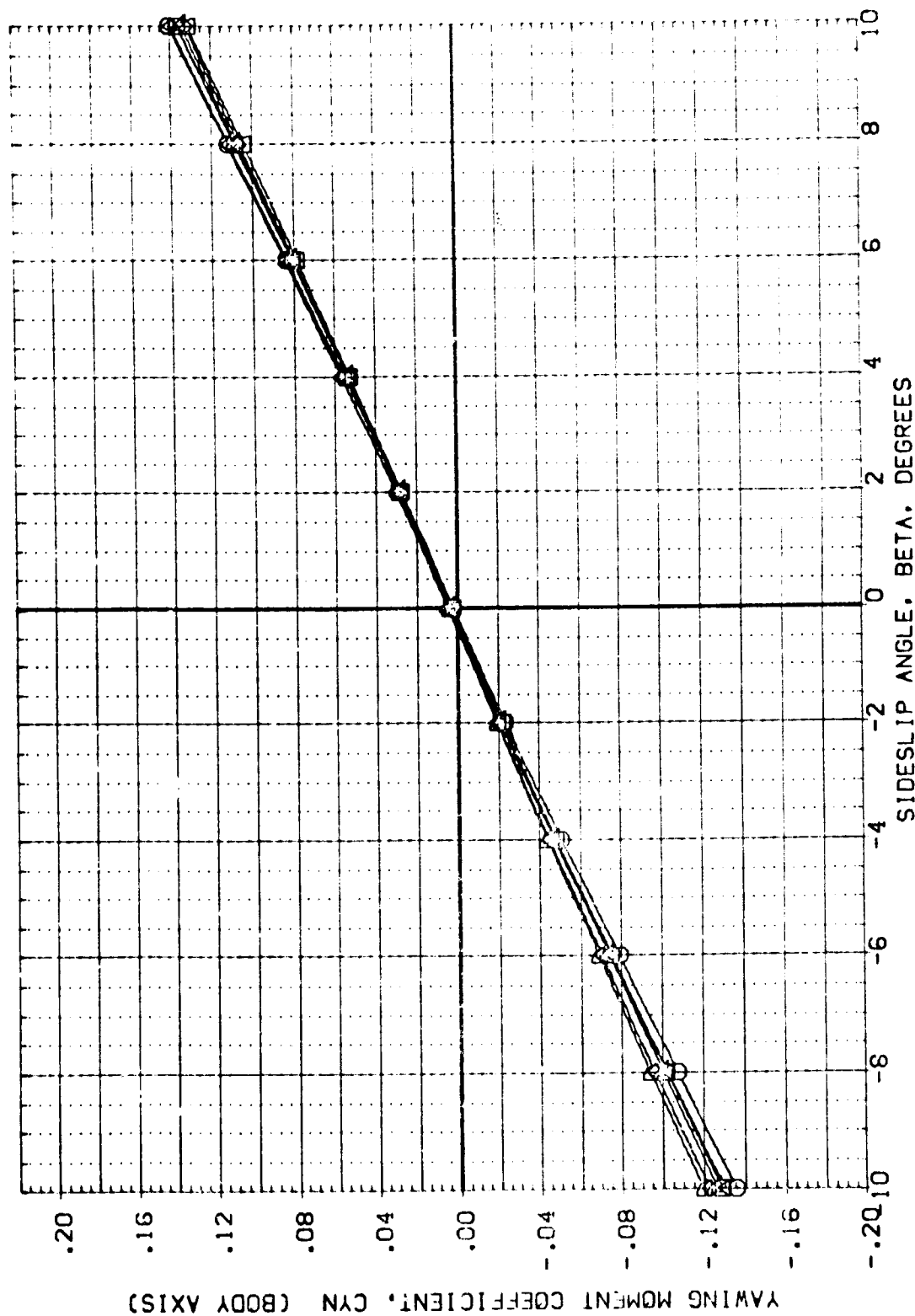
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83014)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980
(A83015)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 3.130
(A83016)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 2.130
(A83017)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 5.490
(A83018)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000
(A83019)	M5FC 5701(A31F)(C3)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(O)MACH = 1.47

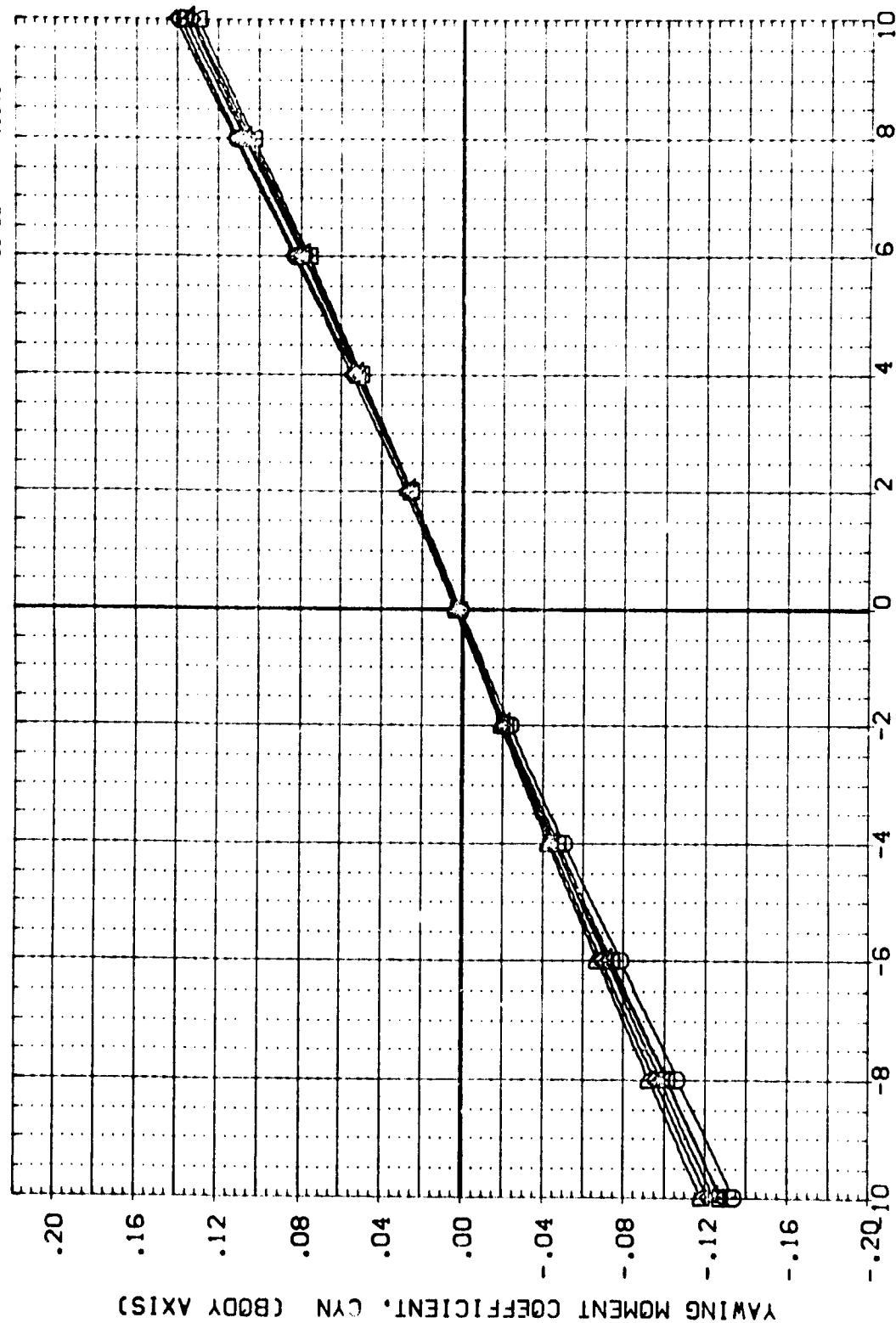
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION	SC. IN
(A83014)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	SREF	6.1960
(A83015)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	LREF	5.3130
(A83016)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	BREF	5.3130
(A83017)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	XREF	2.5490
(A83018)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	YREF	2.5490
(A83019)	MSFC 570((A31F)(03))((T9))((S3/2))((S3/2))	-5.000	-500	.140	ZREF	2.5490
					SCALE	.0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(E)MACH = 2.99

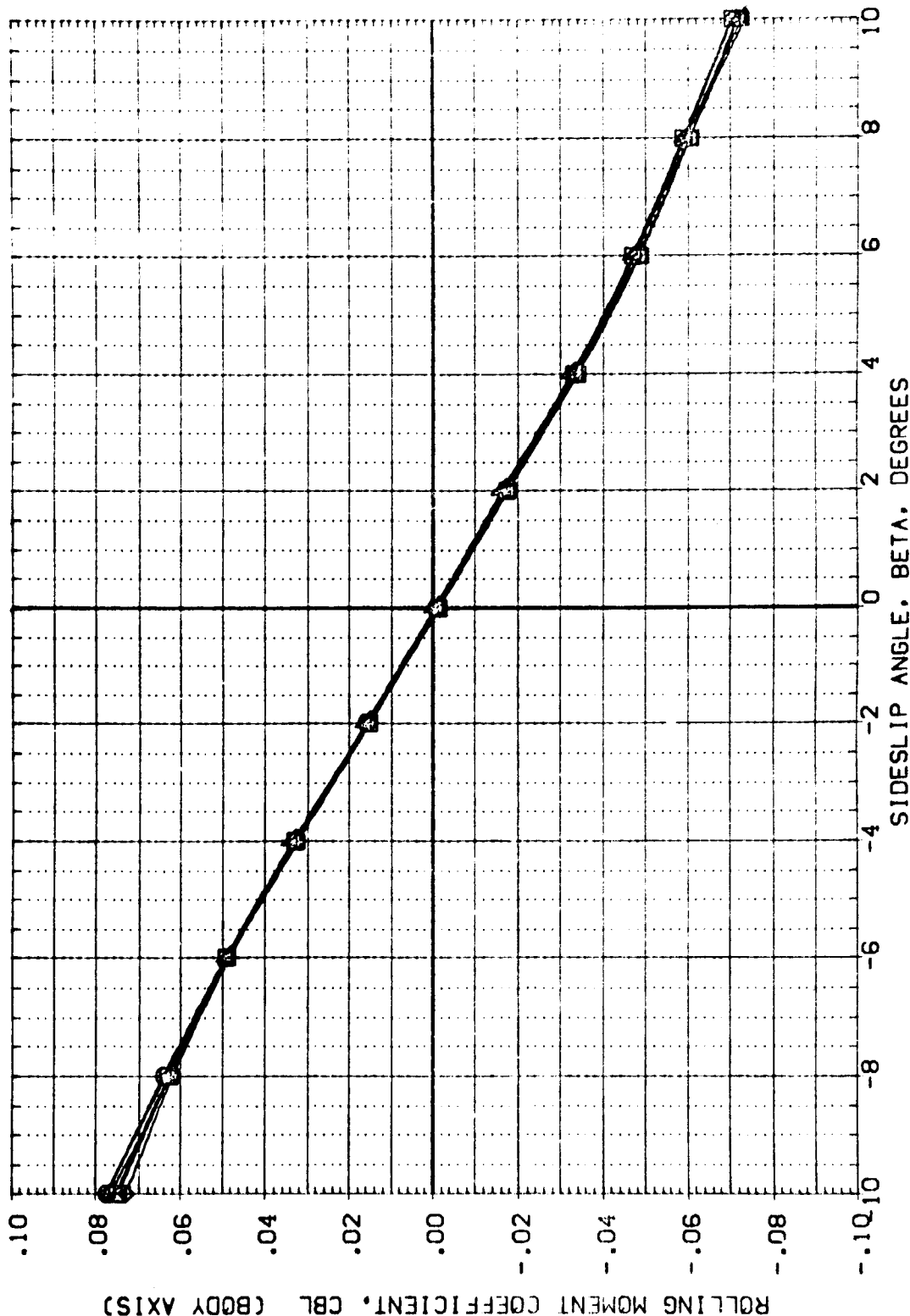
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 5.1980 SO: IN
(A83015)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN:
(A83016)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	1500	.140	BREF 5.3130 IN:
(A83017)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN:
(A83018)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN:
(A83019)	MSFC 570((IA31F)(03)/((T9)/(S3/2)/(S3/2)	-5.000	1500	.140	ZMRP .0000 IN:
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(F)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83015)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP 2.5490 IN.
(A83018)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
(A83019)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SCALE .0040

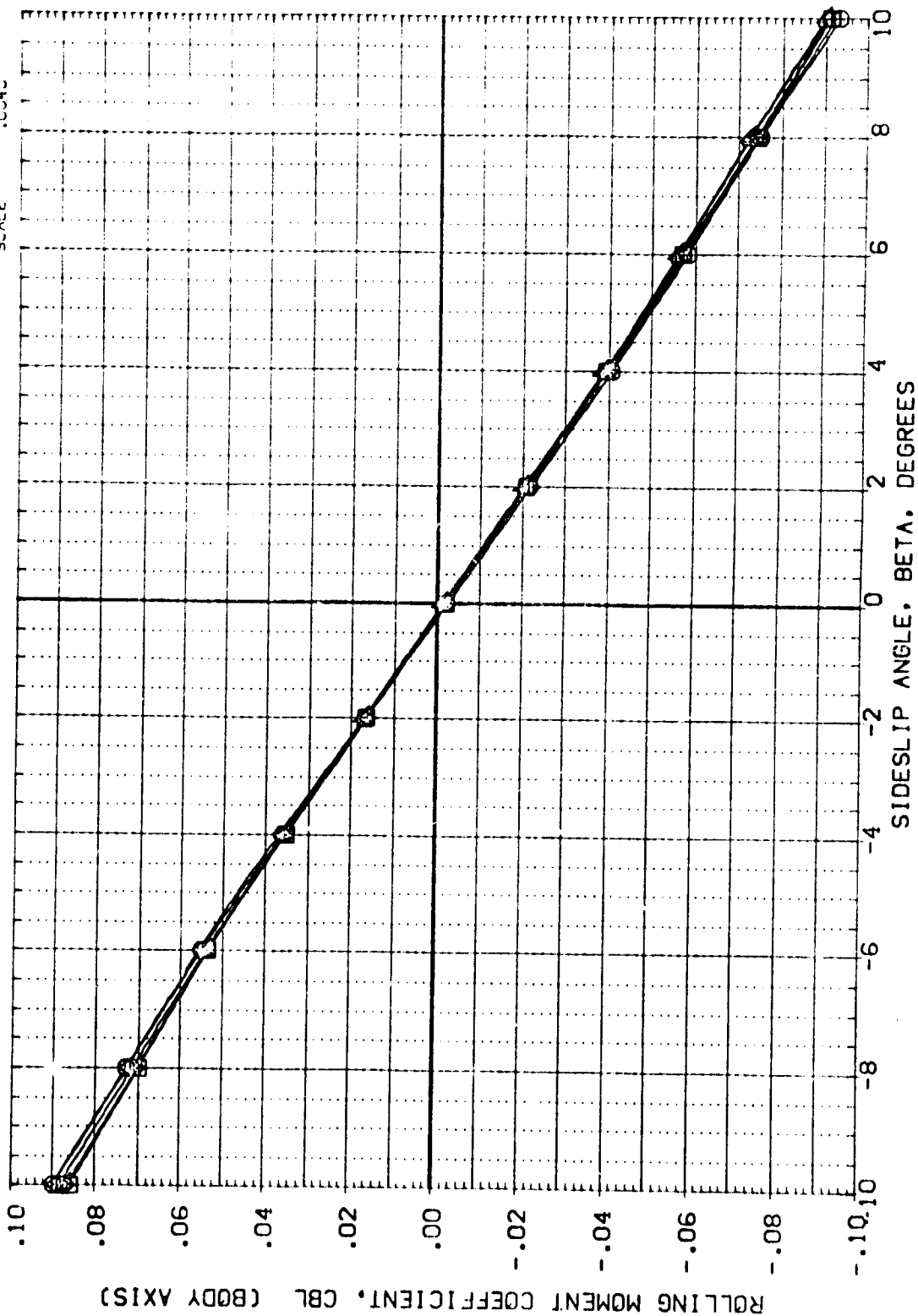


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(A)MACH = .90

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83015)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	500	.140	LREF 5.3130
(A83016)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	500	.140	BREF 5.3130
(A83017)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490
(A83018)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000
(A83019)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-5.000	1.500	.140	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION

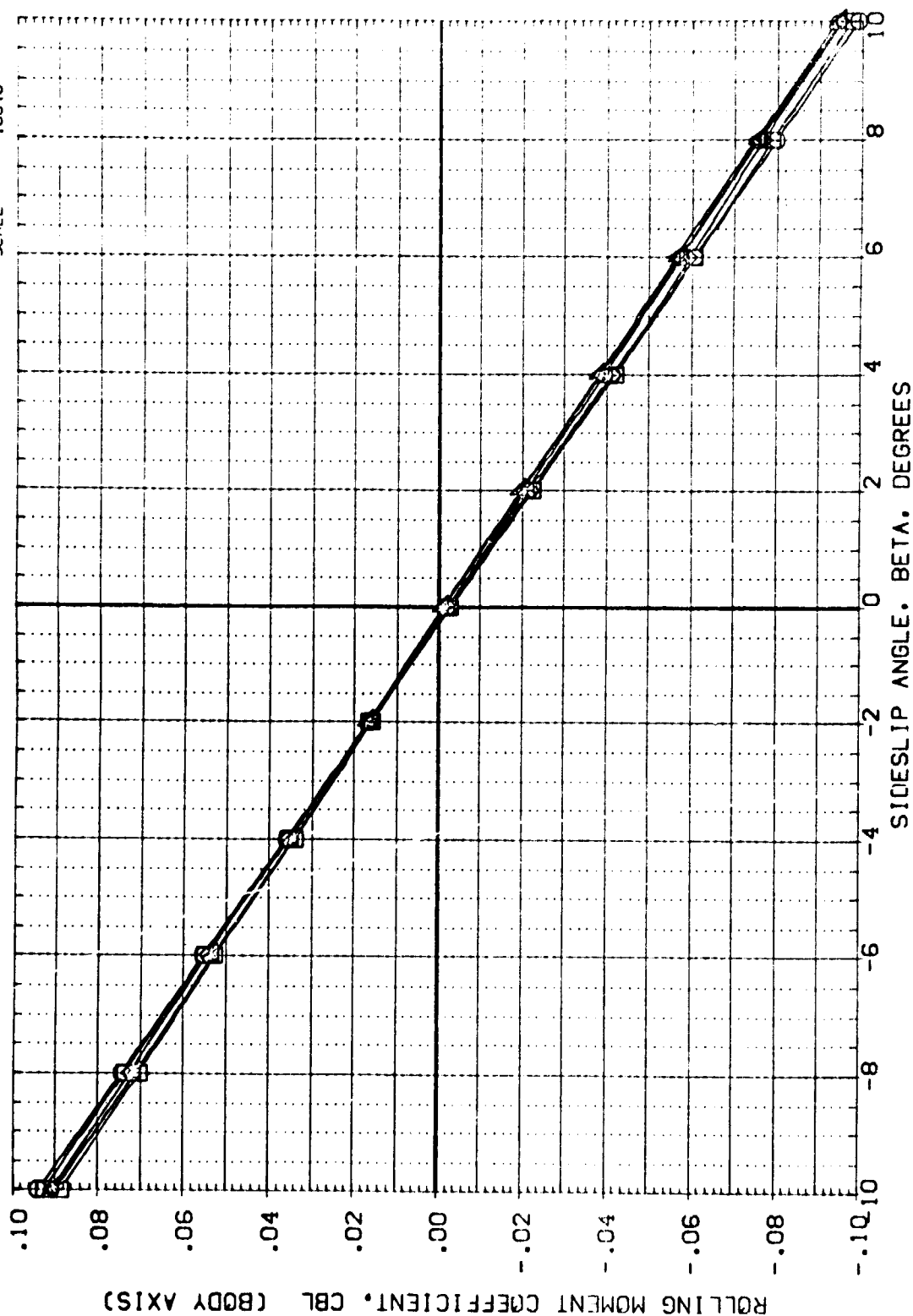
(A83014)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83015)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83016)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83017)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83018)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)
(A83019)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBITAL DELTA Z

-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140

REFERENCE INFORMATION

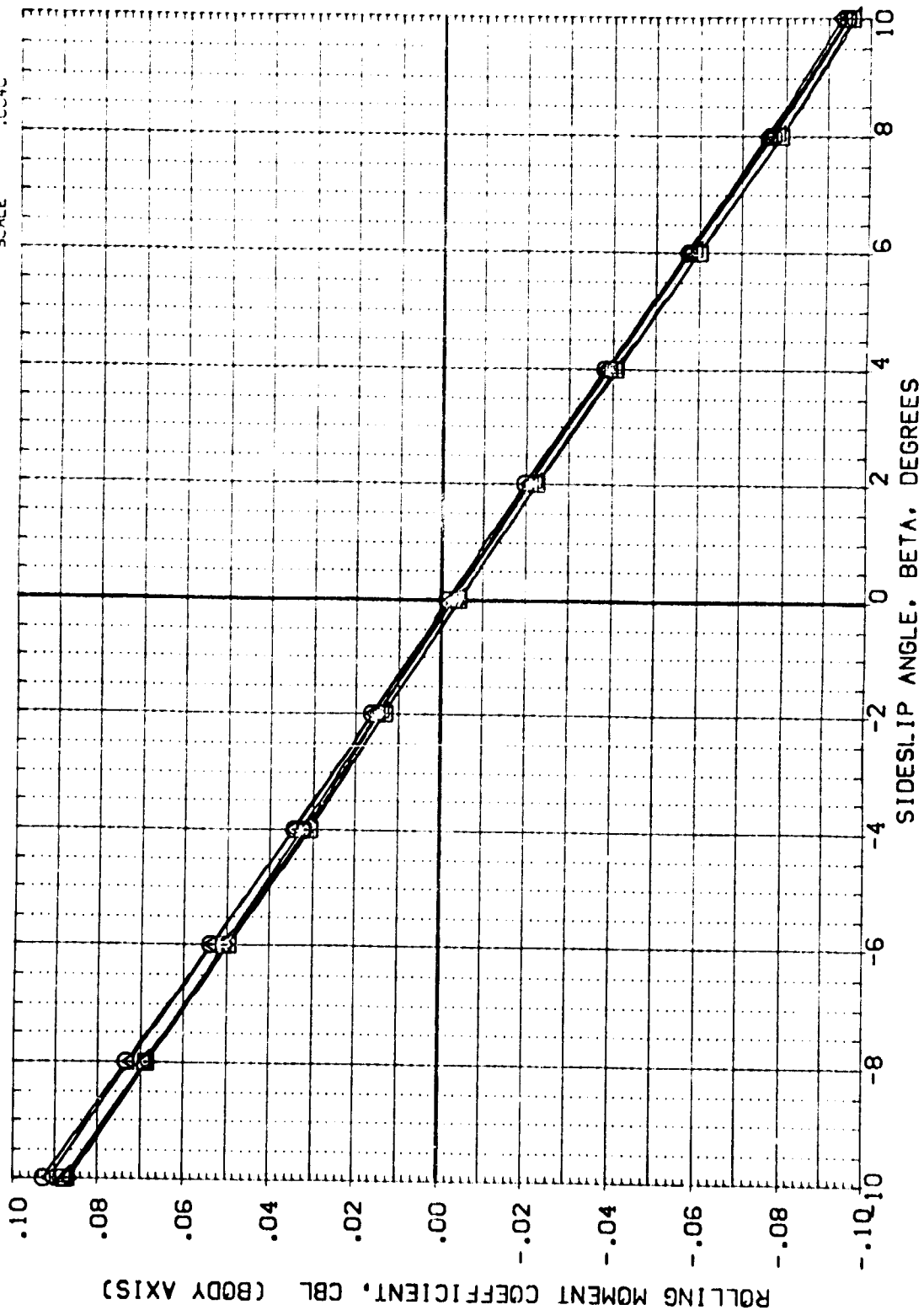
SREF	6.1980	50. IN
LREF	5.3130	50. IN
BREF	5.3130	50. IN
XMRP	2.5490	50. IN
YMRP	.0000	50. IN
ZMRP	.0000	50. IN
SCALE	.0040	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(C)MACH = 1.24

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	SREF 6.1980 SD. IN
(A83015)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	LREF 5.3130
(A83016)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	BREF 5.3130
(A83017)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	YMRP 2.5460
(A83018)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	ZMRP .0000
(A83019)	MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])	-5.000	-500	.140	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(O)MACH = 1.47

DATA SET SYMBOL CONFIGURATION DESCRIPTION

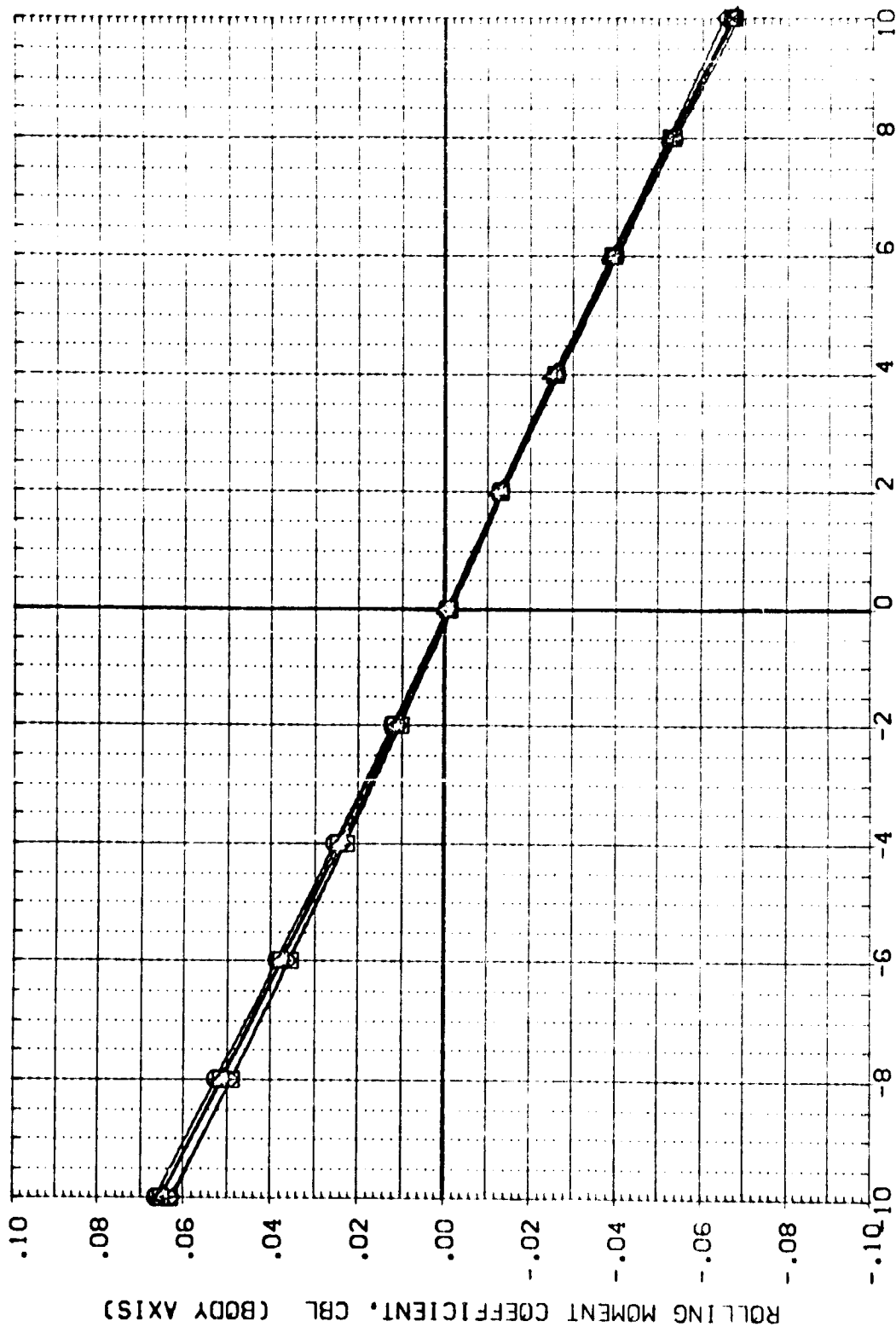
(A83014)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83015)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83016)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83017)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83018)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)
(A83019)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBITING DELTA Z

-5.000	-500	.140
-5.000	500	.140
-5.000	1500	.140
-5.000	500	.140
-5.000	1500	.140

REFERENCE INFORMATION

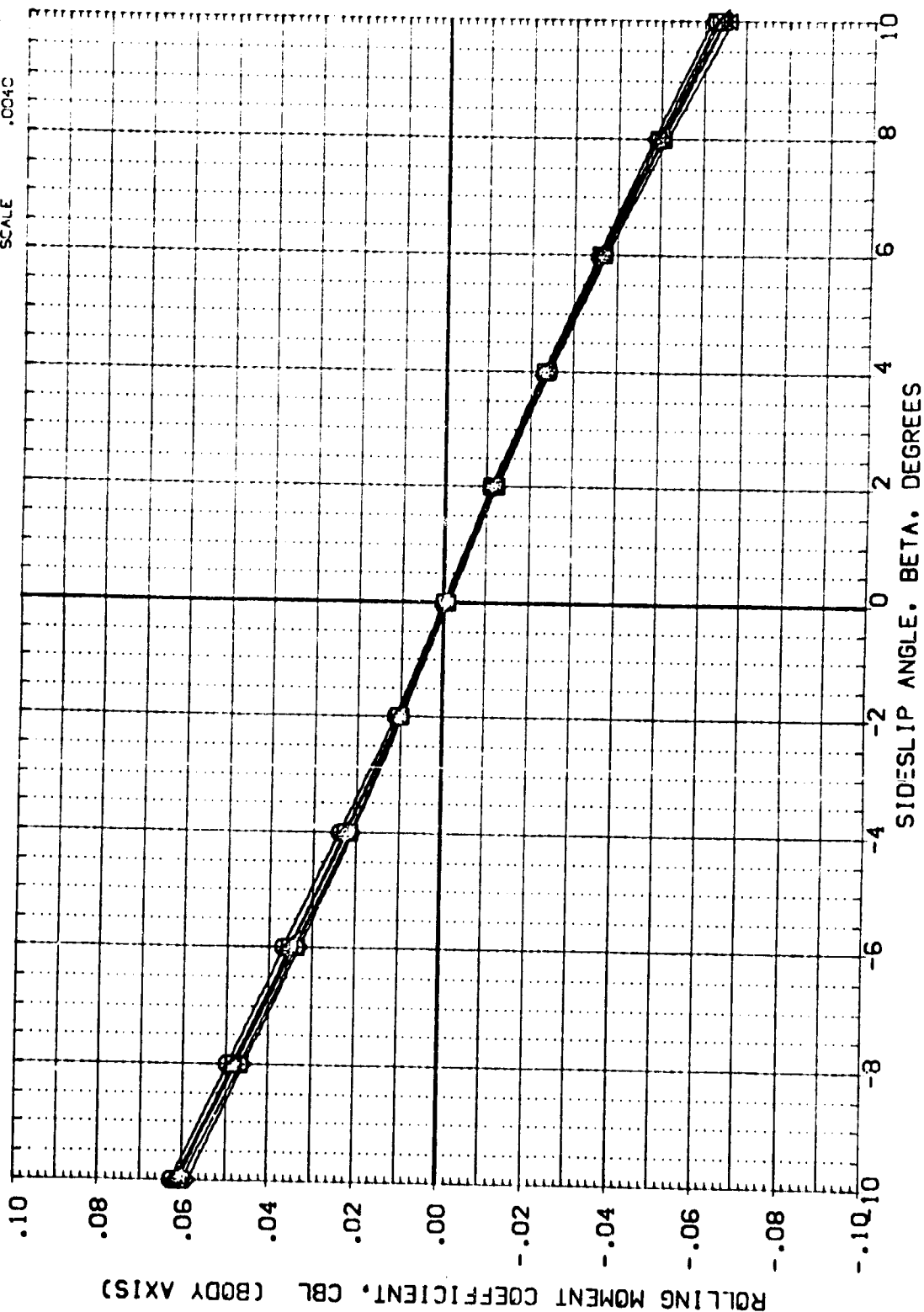
SREF	6.1980	SO	IN
LREF	5.3130	NO	IN
BREF	5.3130	NO	IN
XMRP	2.5490	NO	IN
YMRP	.0000	NO	IN
ZMRP	.0000	NO	IN
SCALE	.0040		



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	SREF 6.1980 SO. IN
(A83015)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	LREF 5.3130 IN.
(A83016)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	BREF 5.3130 IN.
(A83017)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	XMRP 2.5490 IN.
(A83018)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	YMRP .0000 IN.
(A83019)	MSFC 570((A3IF)(03)/(T9)/(S3/2)/(S3/2))	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)/(S3/2)/(S3/2)$

(F)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORBIT INC DELTA Z REFERENCE INFORMATION SO. IN

(A83014) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 SREF 6.1980 .0000

(A83015) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 LREF 5.3130 .0000

(A83016) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 BREF 5.3130 .0000

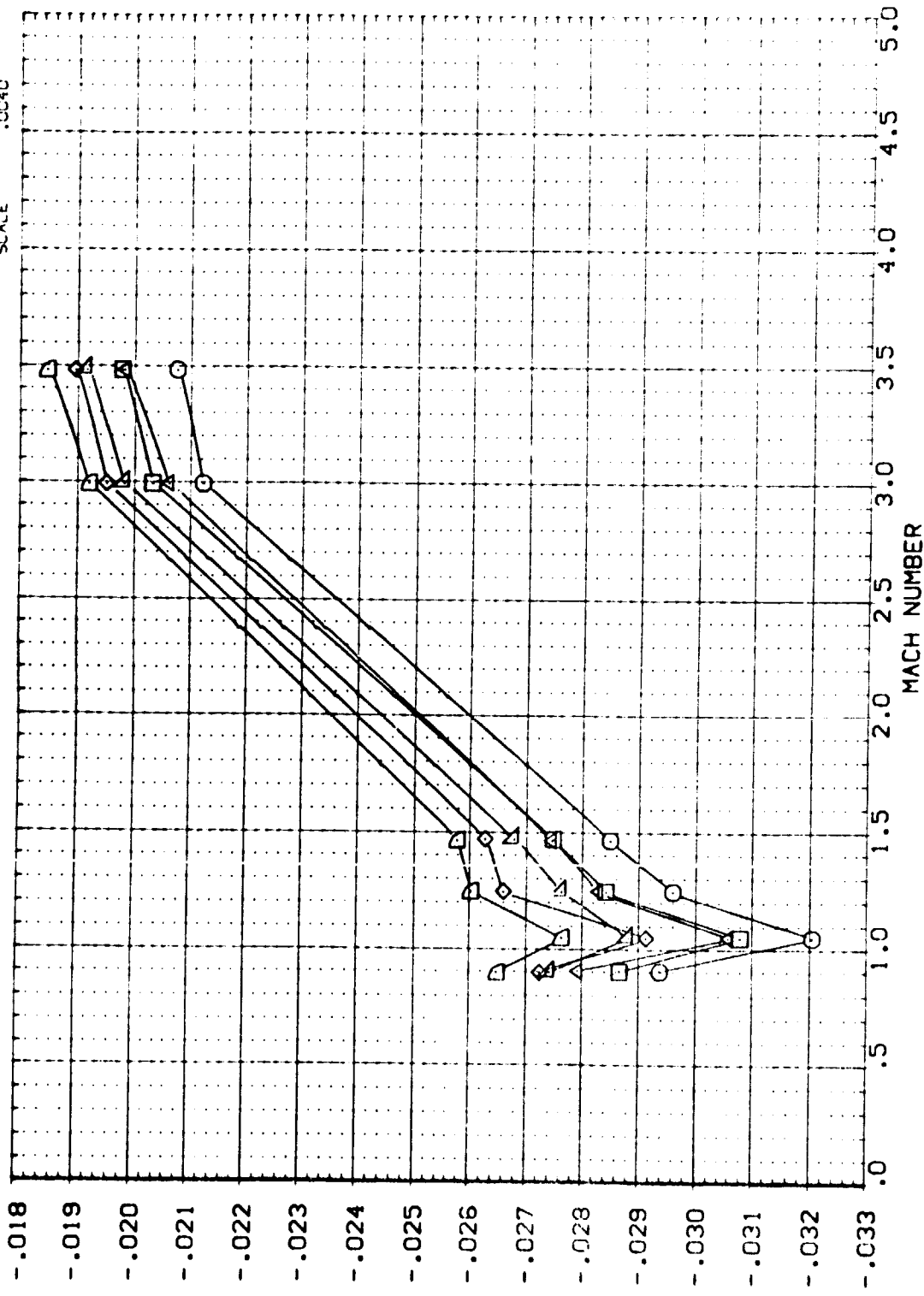
(A83017) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 XMRP 2.5450 .0000

(A83018) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 YMRP .0000 .0000

(A83019) MSFC 570((A31F)(03)/((T9)/(S3/2))((S3/2)) -5.000 -500 .140 ZMRP .0000 .0000

SCALE .0010

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

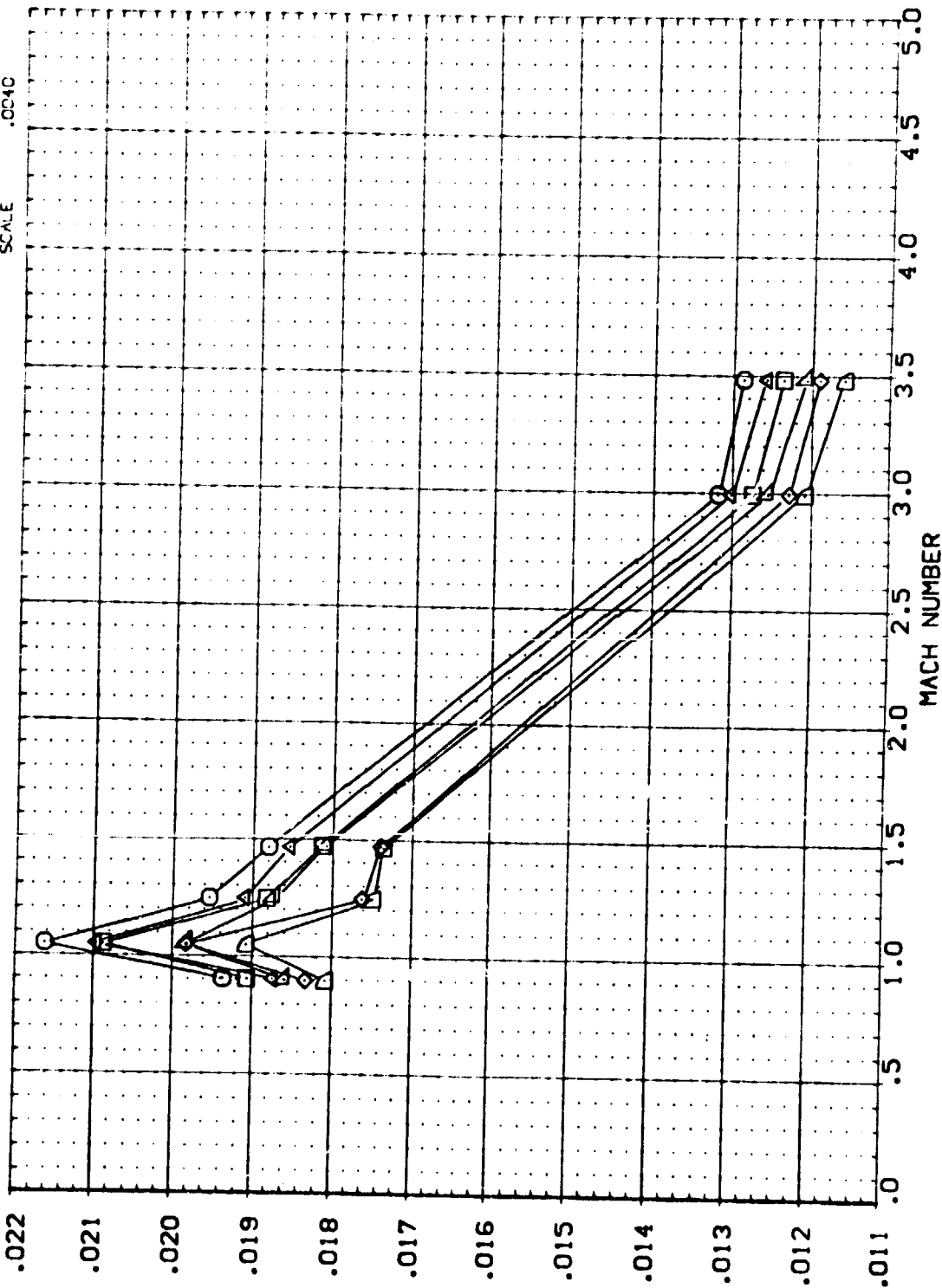


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORBITING DELTA Z REFERENCE INFORMATION

(A83014)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980
(A83015)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130
(A83016)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130
(A83017)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5450
(A83018)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000
(A83019)	MSFC 5701(A31F)(03)/(T9)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000
					SCALE .0040

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE



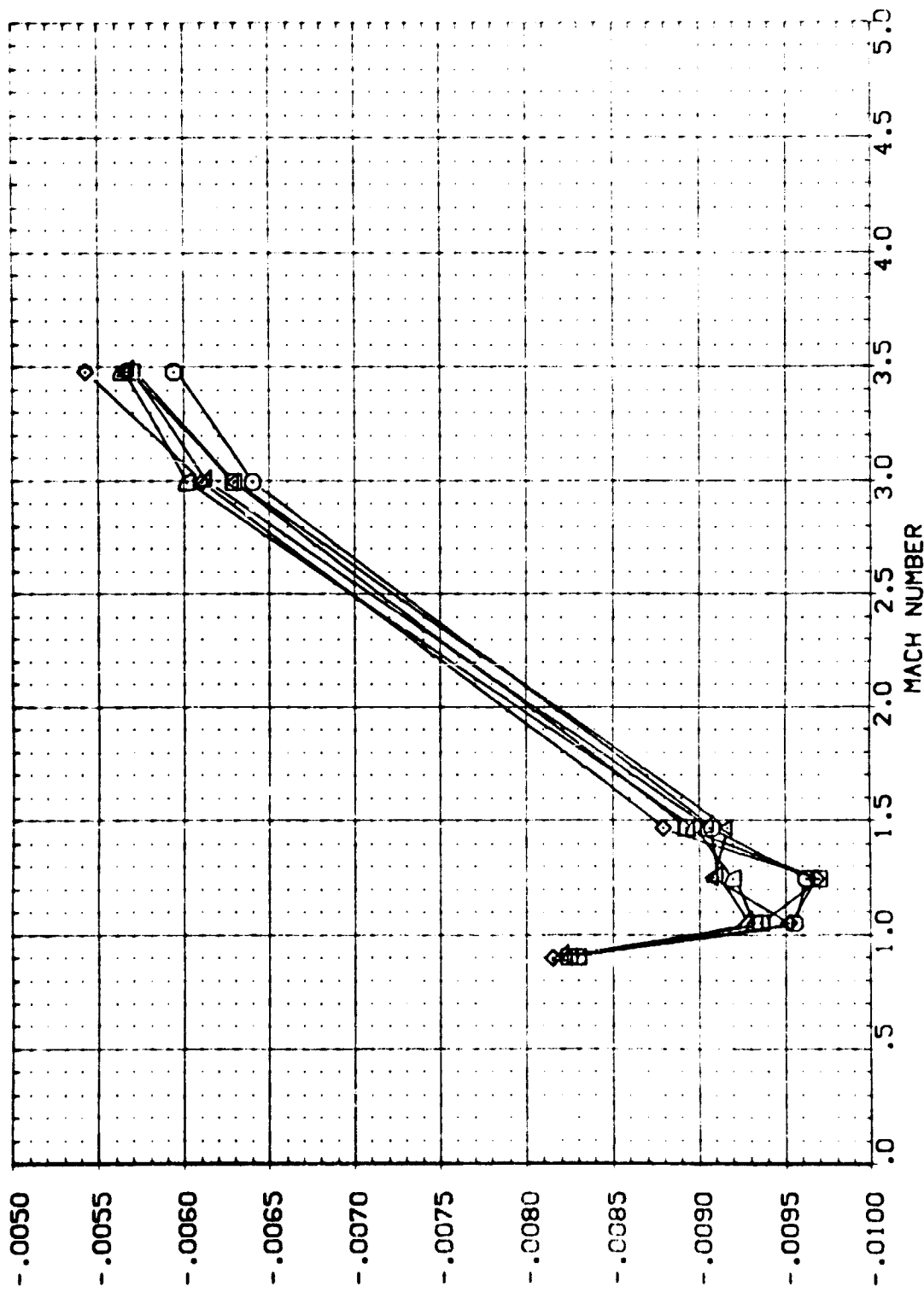
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORBITING DELTA Z REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83014)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	SREF 5.1980 SO. IN
(A83015)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	LREF 5.3130 IN.
(A83016)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	BREF 5.3130 IN.
(A83017)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	XMRP 2.5490 IN.
(A83018)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	YMRP .0000 IN.
(A83019)	MSFC 570(A31F)(03)/(T9)/(S3/2)	-5.000	-5.000	.140	ZMRP .0000 IN.

SCALE .0010

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

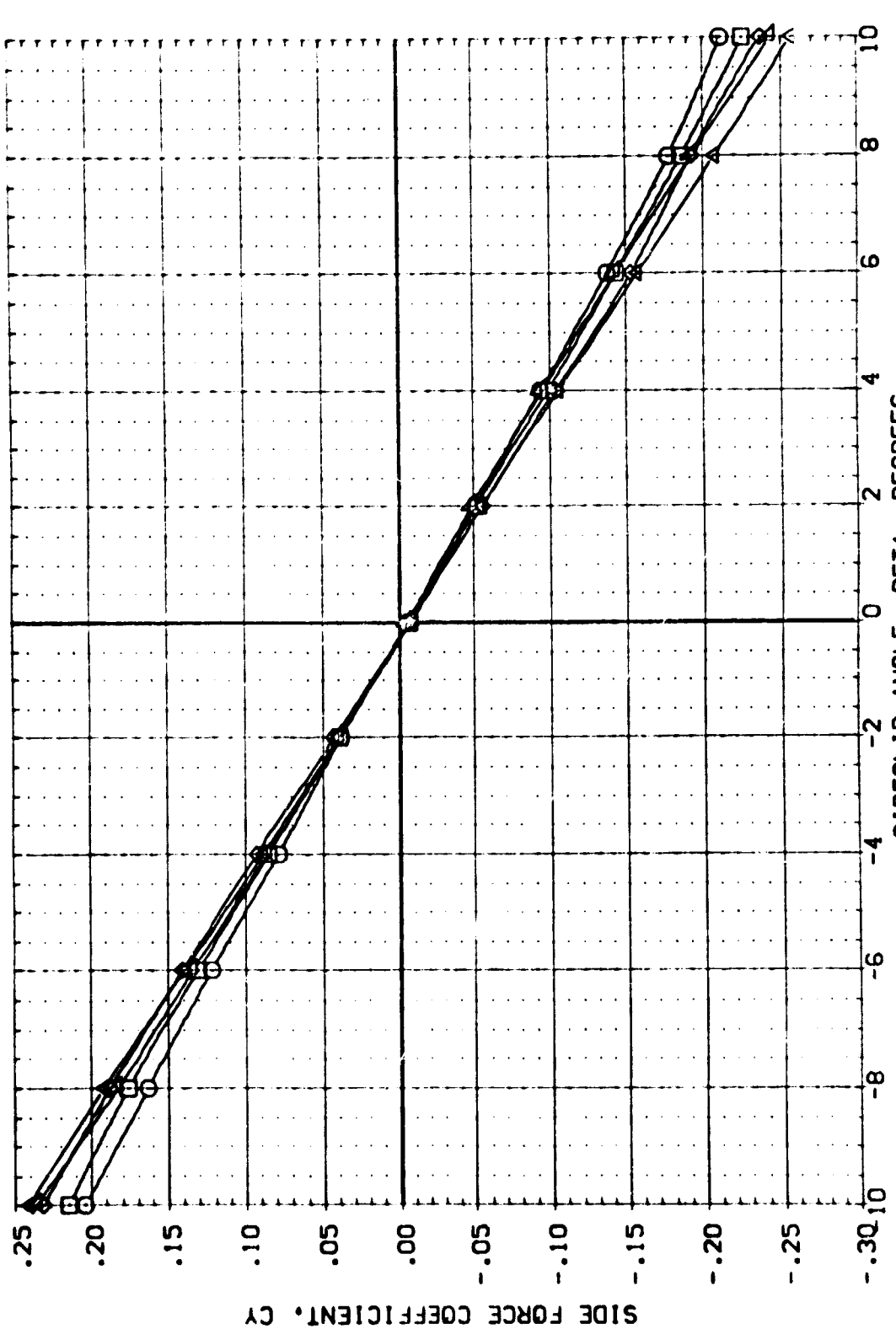


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)

(A83007)

SYMBOL	MACH	PARAMETRIC VALUES					REFERENCE INFORMATION				
○	.602	ALPHA	.000	CONFIG	100.000	SREF	6.1980	SO	IN		
□	.799	DELTA Z	.000	RUDDER	.000	LREF	5.313C				
◇	.895	K-SRB	.140	ORBIT	.500	BREF	5.313C				
△	1.045	SPACER	.000	SPADIA	.000	XMRP	2.5490				
▽	1.246	SPAGAP	.000			YMRP	.0000				
						ZMRP	.0000				
						SCALE	.0040				

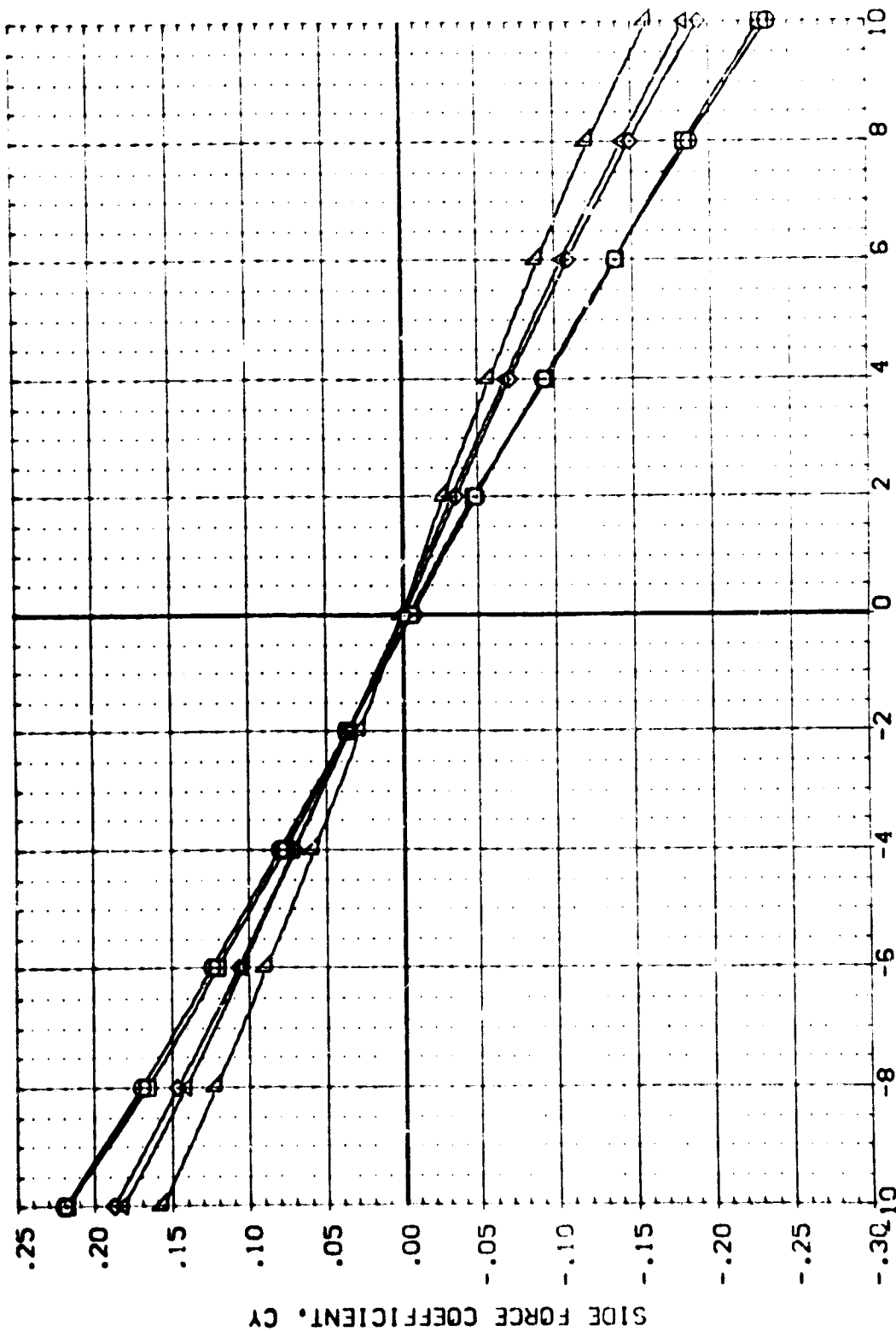


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)

(A83607)

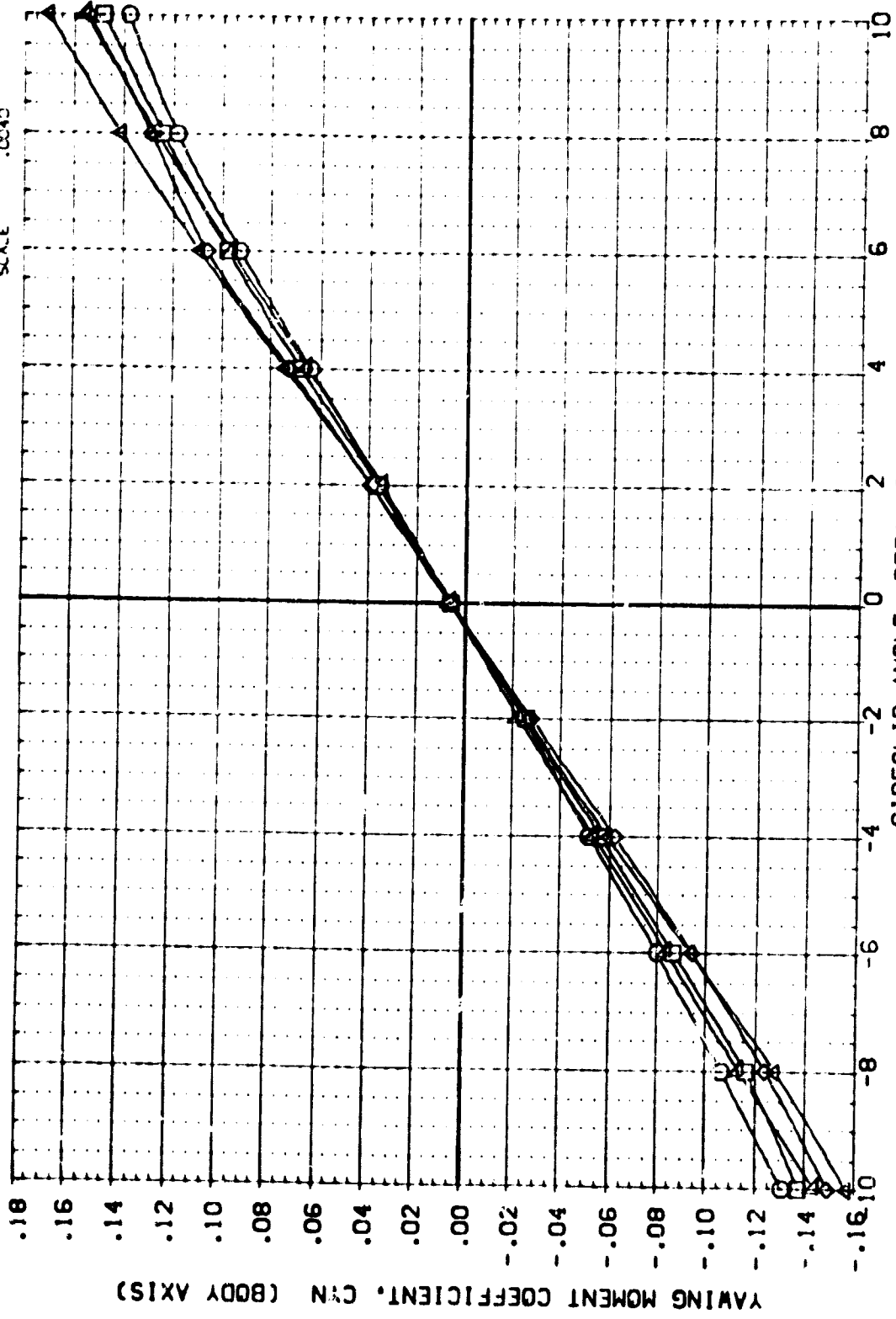
SYMBOL	MACH	ALPHA	DELTA Z	PARAMETRIC VALUES	CONF IG	100.000	REFERENCE INFORMATION
○	1.465			.000	CONF IG	100.000	SREF 6.1980
□	1.983			.140	RUDER	.000	LREF 5.3130
◇	2.990			.000	ORBIT INC	.500	BREF 5.3130
△	3.480			.000	SPADIA	.000	YMRP 2.5480
	4.960			.000	SPAGAP	.000	ZMRP .0000
							SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

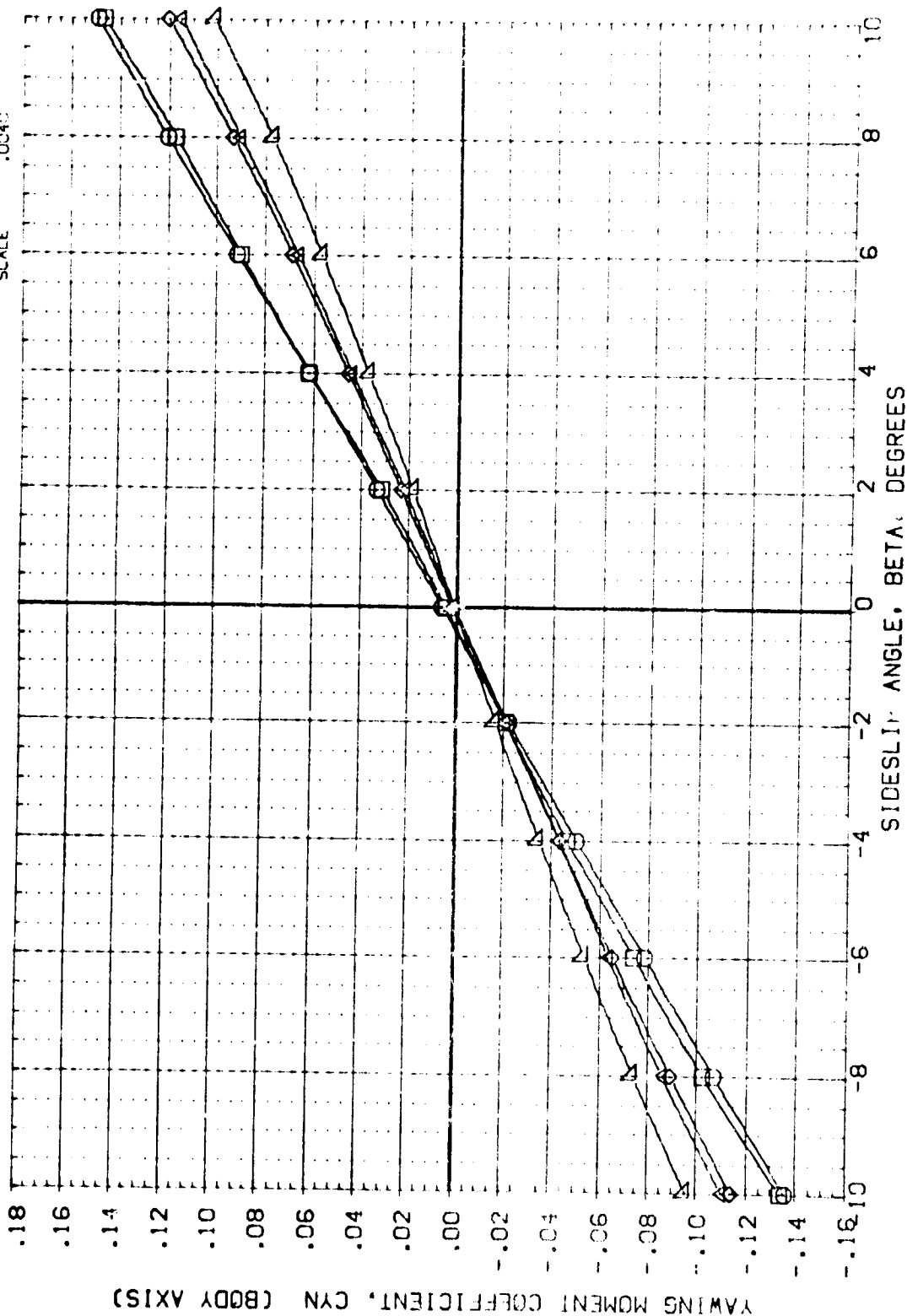
(183007)

REFERENCE INFORMATION	
	SG. IN
SREF	6.1800
LINEF	5.3130
BOCF	5.3130
XAPP	2.5450
VAPP	.0000
7APP	.0000
SCALE	.0040

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T_9)/(S_3/2)/(S_3/2)$

MSFC 570(IA31F)(03)/((T9)/((S3/2)/((S3/2)

(A83007)



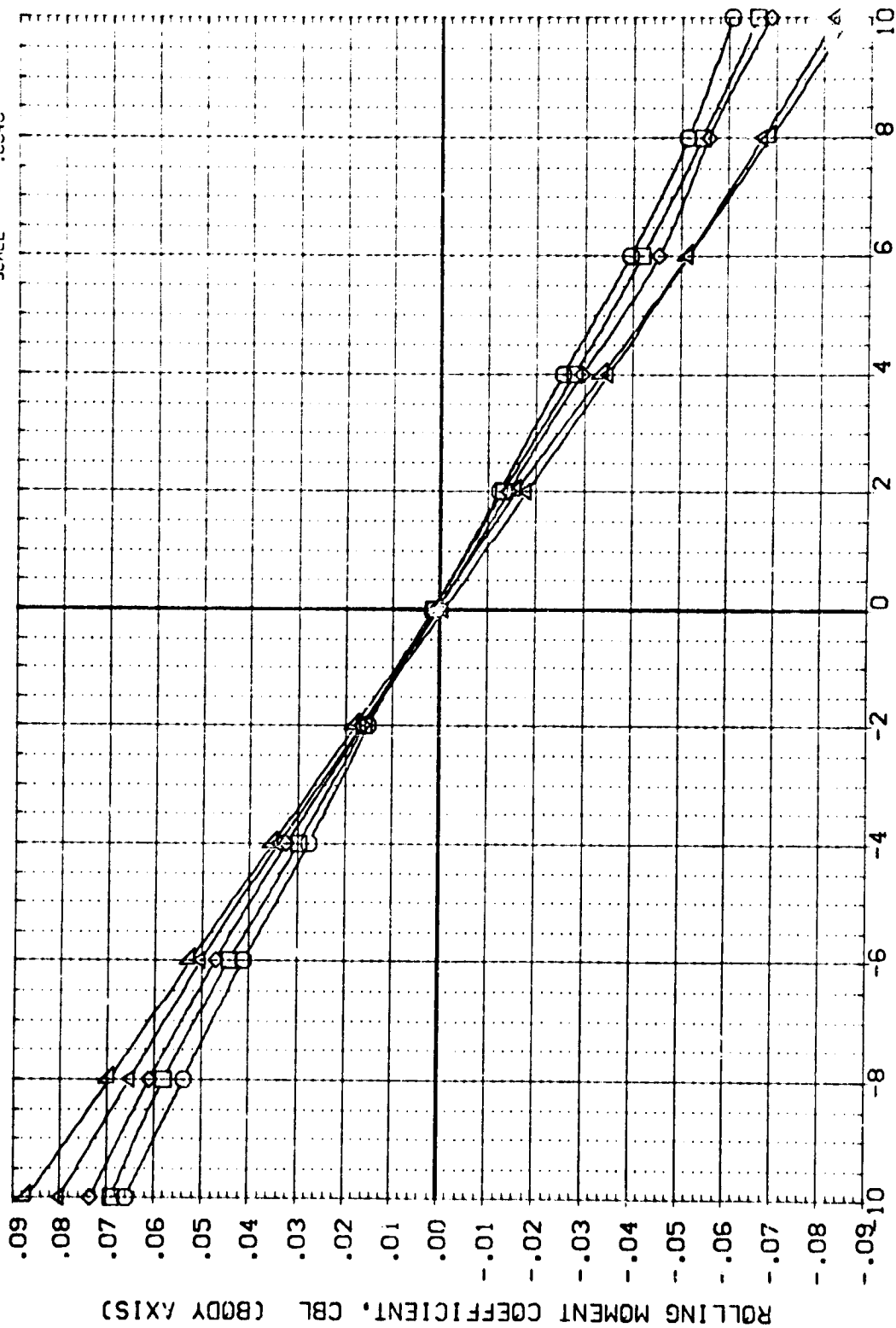
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2)/((S3/2)

MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)

(A83007)

REFERENCE INFORMATION
 SREF 6.1980 SC IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040

PARAMETRIC VALUES
 MACH .602 ALPHA .000 CONF IG 100.000
 .799 DELTA Z .000
 .895 X-SRB .500
 1.045 SPACER .000
 1.246 SPAGAP .000

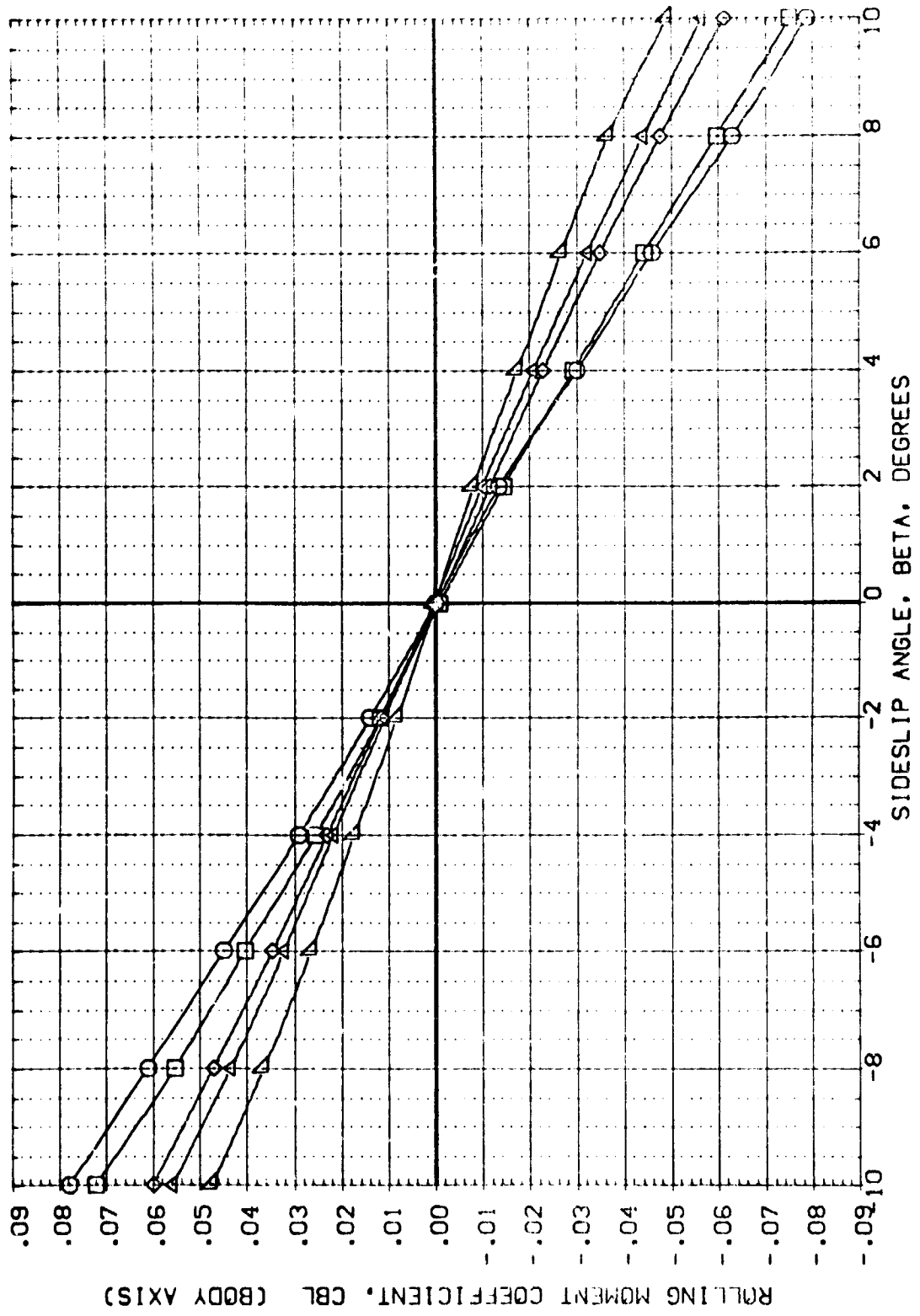


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

MSFC 570(IA31F)(03)/((T9)/(S3/2))/(S3/2)

(A83007)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION			
		ALPHA	CONF IG	RUDDER	SPADIA	SREF	LREF	BREF	SO. IN
○	1.465	.000	.000	.140	.000	6.1980	5.3130	5.3130	N.
□	1.983	.000	.000	.000	.500	5.3130	5.3130	2.5490	N.
◇	2.990	.000	.000	.000	.000	5.3130	5.3130	.0000	N.
△	3.480	.000	.000	.000	.000	5.3130	5.3130	.0000	N.
▽	4.960	.000	.000	.000	.000	5.3130	5.3130	.0000	N.
						SCALE			.0040



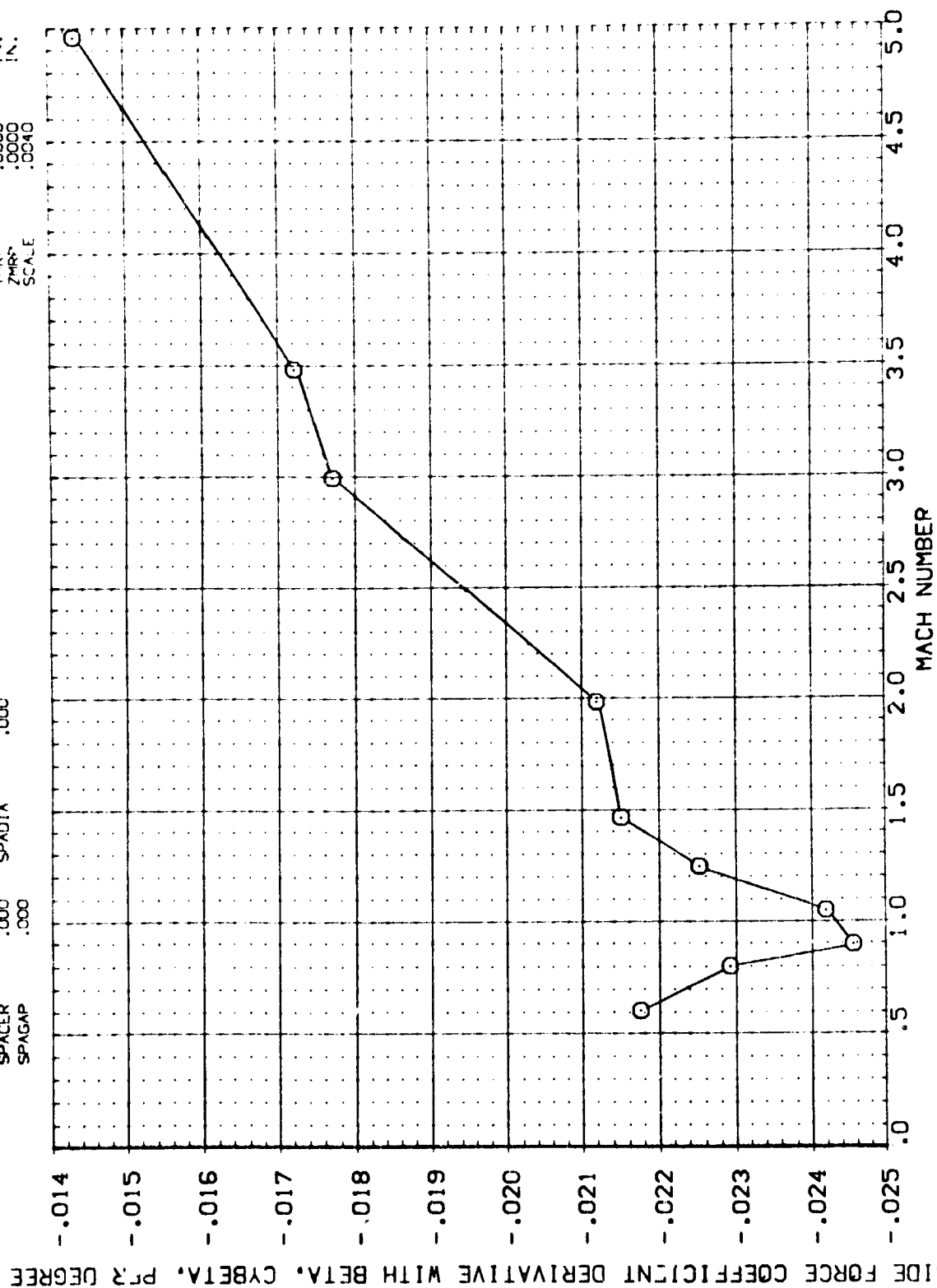
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

MSFC 570(IA31F)(03)/((T9)/((S3/2)/((S3/2)))

(A83007)

REFERENCE INFORMATION
SREF 6.1980 SQ. IN
LREF 5.3130 N.
BREF 5.3130 N.
XMRP 2.5490 N.
YMRP .0000 N.
ZMRP .0000 N.
SCALE .0040

PARAMETRIC VALUES
ALPHA .000 CONFIG 100.000
DELTAZ .140 RUDDER .000
X-SRB .000 ORBINC .500
SPACER .000 SPADIA .000
SPAGAP .000



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2)/((S3/2)))

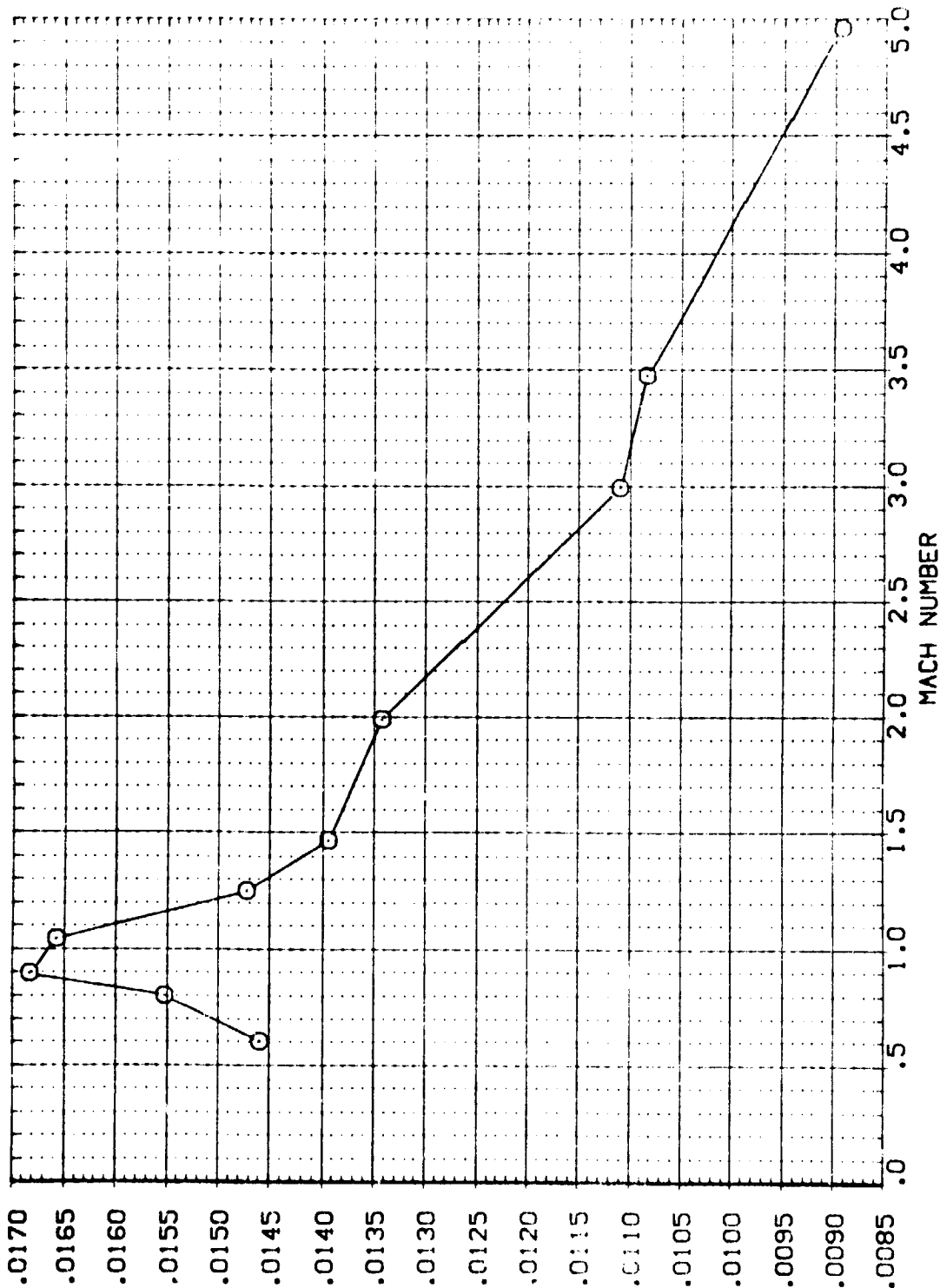
MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)

(A83007)

PARAMETRIC VALUES
 ALPHA .000 CONF IG 100.000
 DELTA Z .140 RUDDER .000
 X-SRB .000 ORBINC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 6.1980 SC IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/(S3/2)/(S3/2)

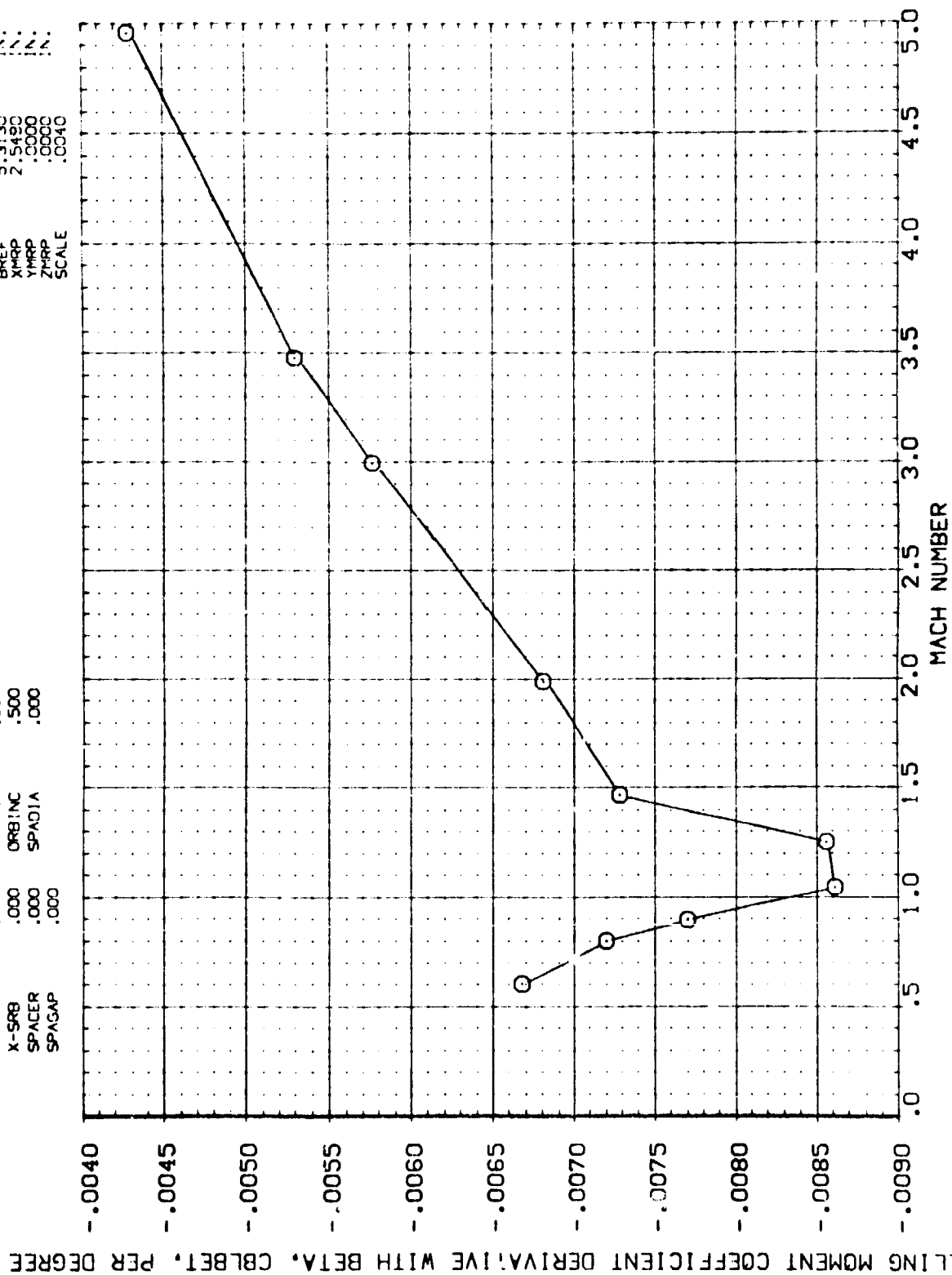


MSFC 570(1A31F)(03)/((T9)/((S3/2)/((S3/2)))

(A83007)

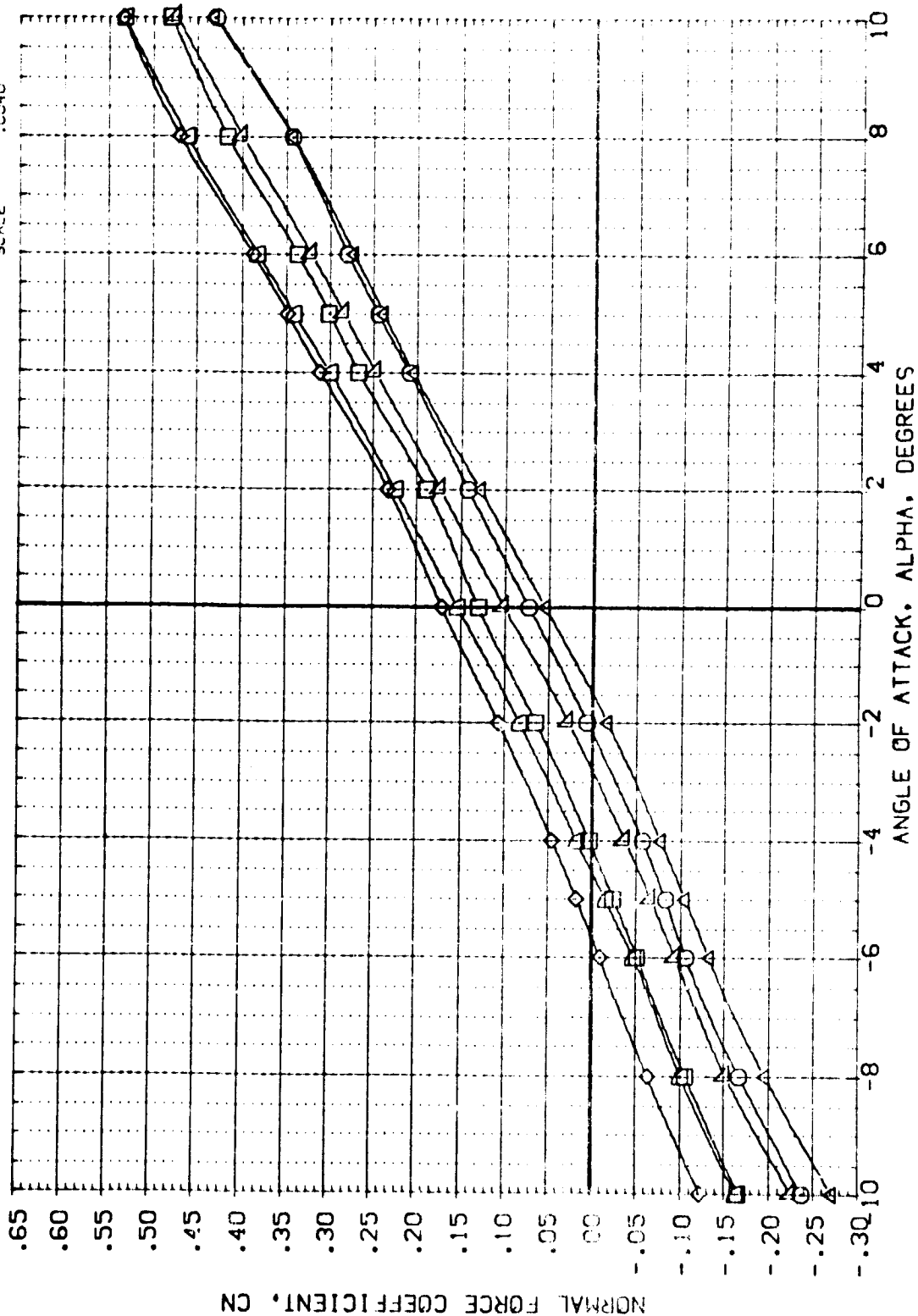
REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000
 DELTAZ .140
 X-SRB .000
 SPACER .000
 SPAGAP .000
 CONFIG 100.000
 RUDDER .000
 ORBINC .500
 SPADIA .000



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)/((S3/2)/((S3/2)))

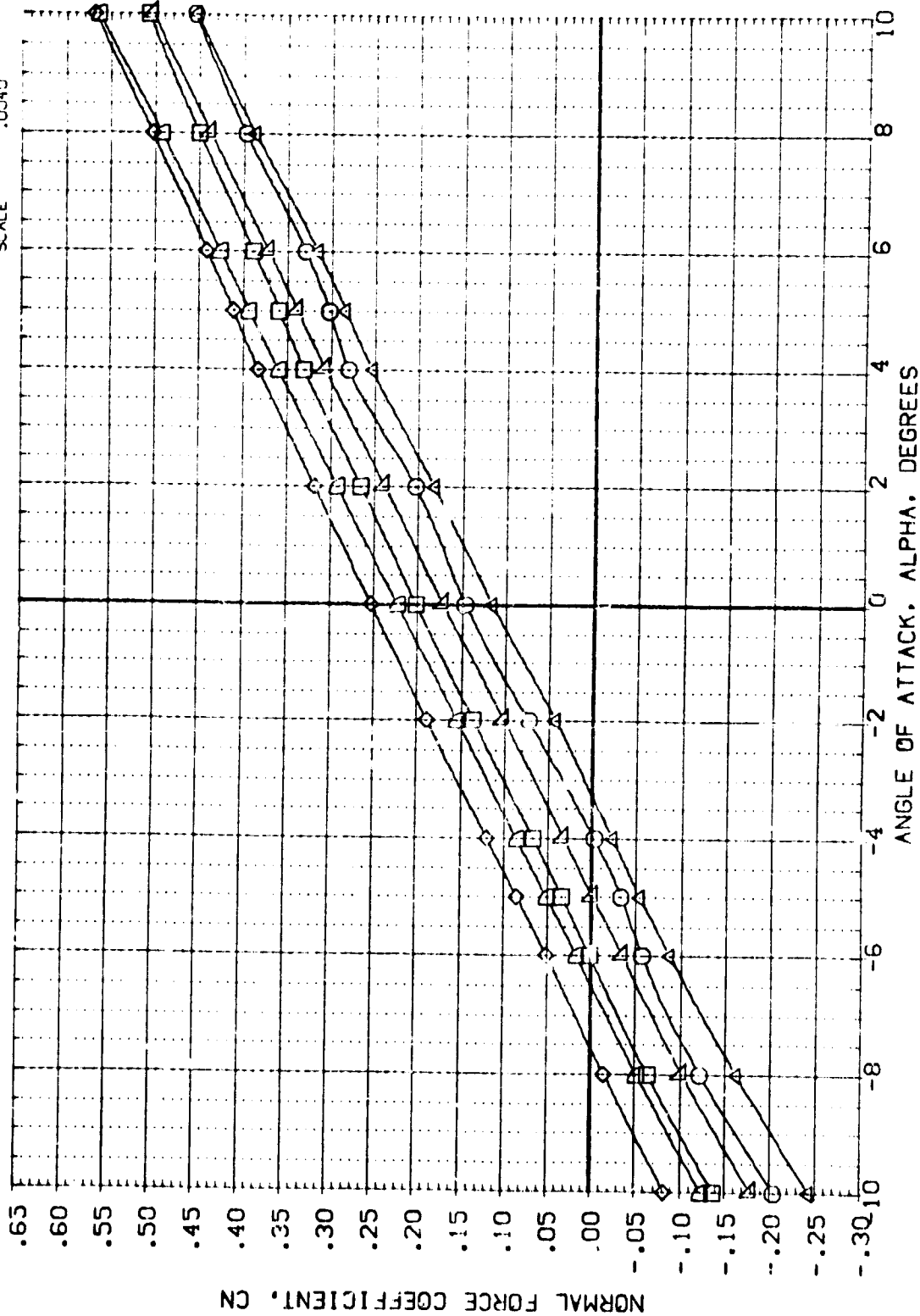
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83024)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83025)	MSFC 570(I A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SC. IN
(C83021)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83022)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83024)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000
(C83025)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(3)MACH = .90

DATA SET SYMBOL: (C83020) (C83021) (C83022) (C83023) (C83024) (C83025)

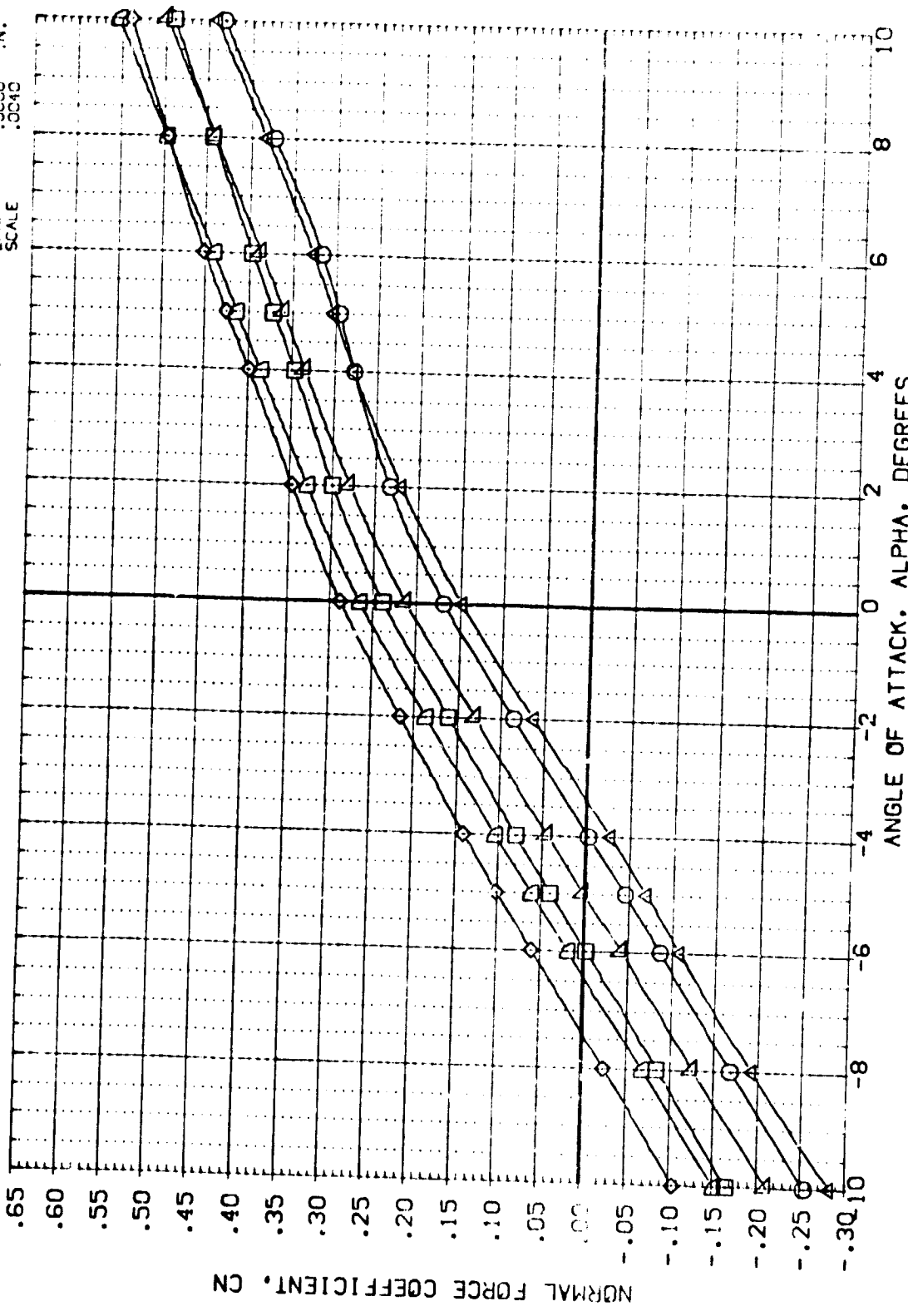
CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(03)/(T9)(US)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)(US)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)(US)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)(US)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)(US)/(S3/2)/(S3/2)

BETA: .000 .000 .000 .000 .000

ORBITING: .500 .500 .500 .500 .500

DELTA Z: .140 .140 .140 .280 .280

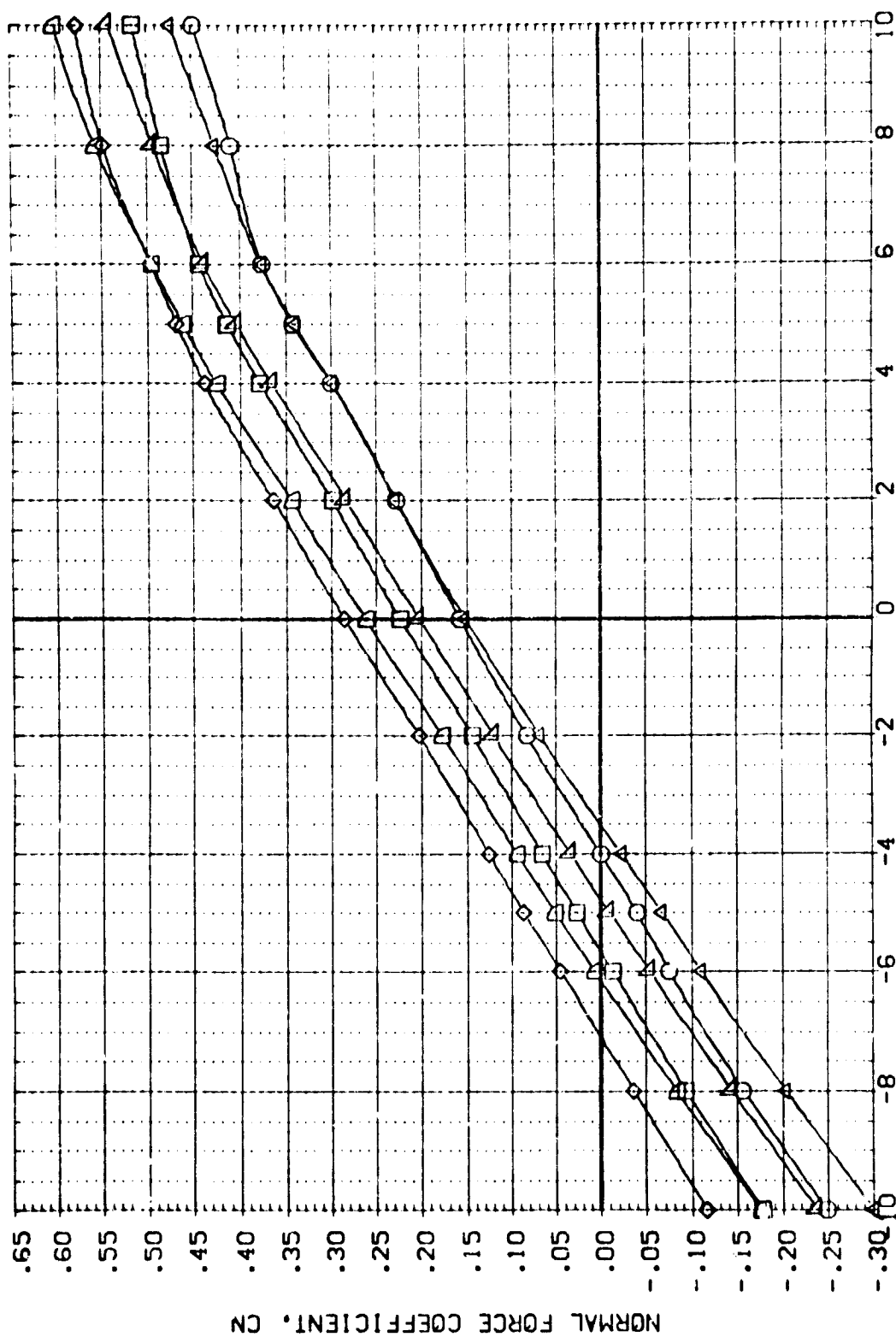
REFERENCE INFORMATION: SREF 6.1980 SO. IN LREF 5.3130 N. N. BREF 5.3130 N. N. XMRP 2.5490 N. N. YMRP .0000 N. N. ZMRP .0000 N. N. SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83021)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83022)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP 2.5490
(C83024)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570(I A31F)(C31)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040

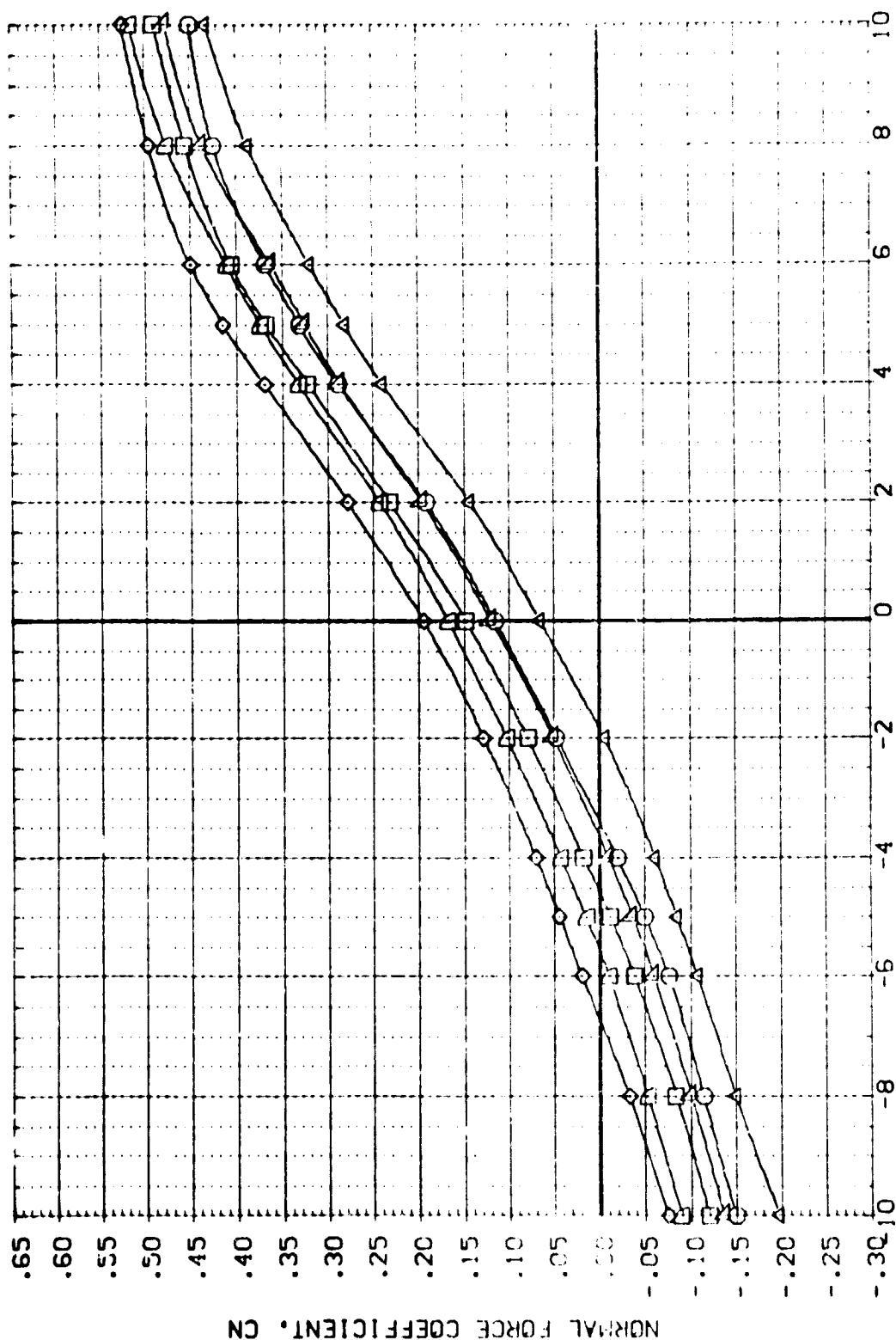


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(C)MACH = 1.25

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SC. IN
(C83021)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRD 5.5490
(C83024)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRD .0000
(C83025)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRD .0000
					SCALE .0040

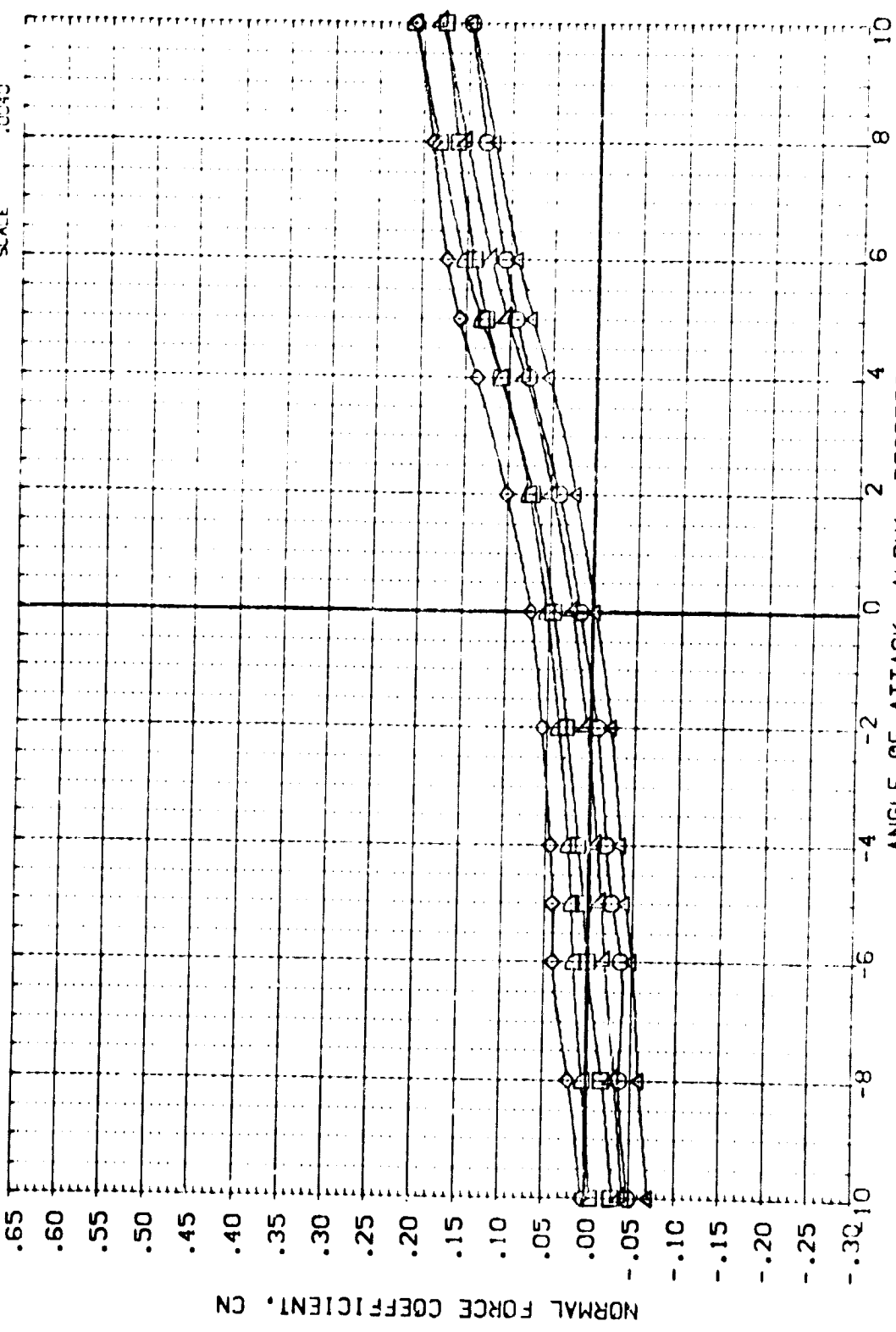


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(M)MACH = 1.97

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
[C83270]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
[C83271]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
[C83272]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
[C83273]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5480
[C83274]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
[C83275]	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

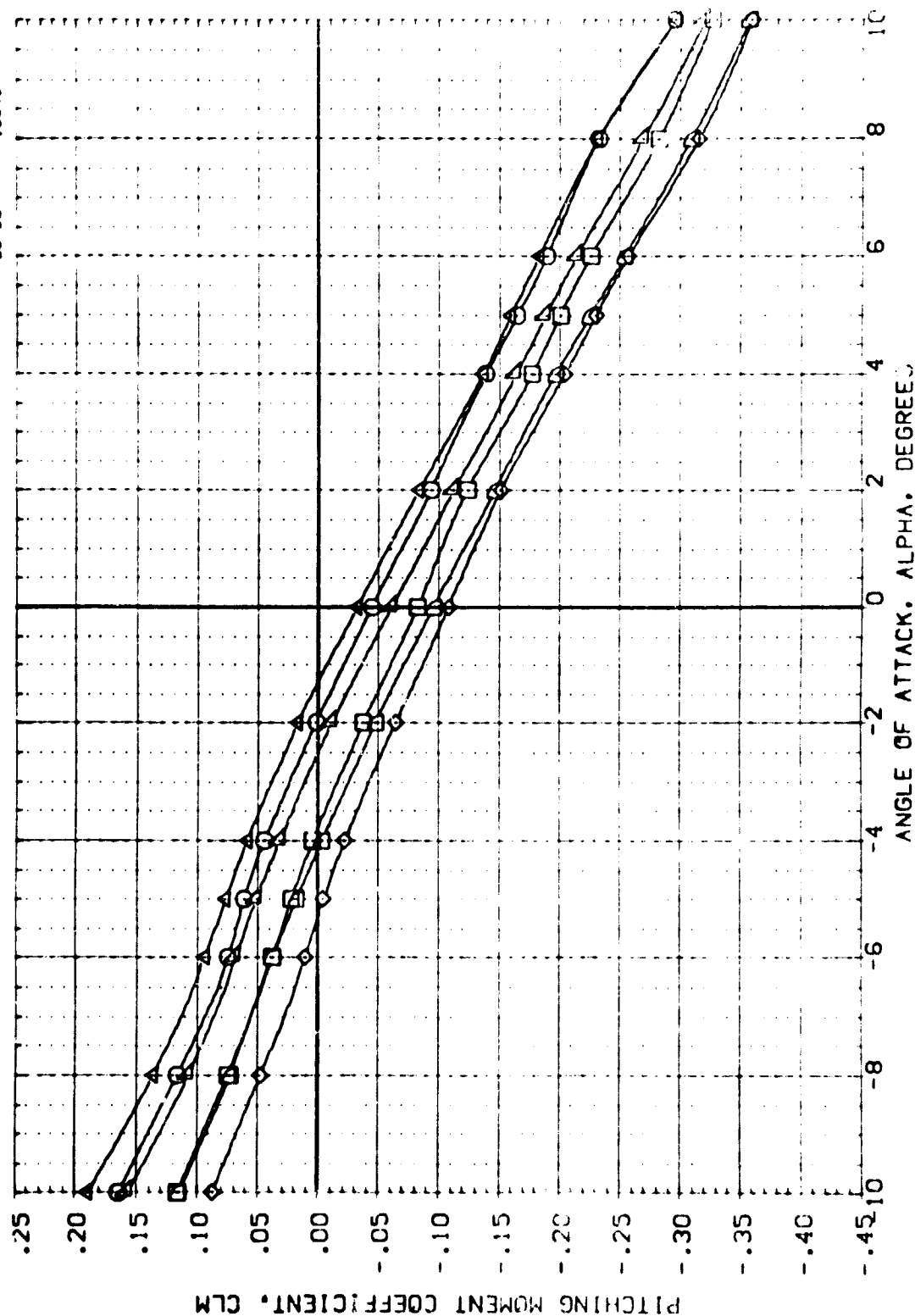
(F)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83020) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)
 (C83021) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)
 (C83022) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)
 (C83023) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)
 (C83024) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)
 (C83025) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)

BETA ORBITING DELTA Z
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .280
 .000 .500 .280
 .000 .500 .280

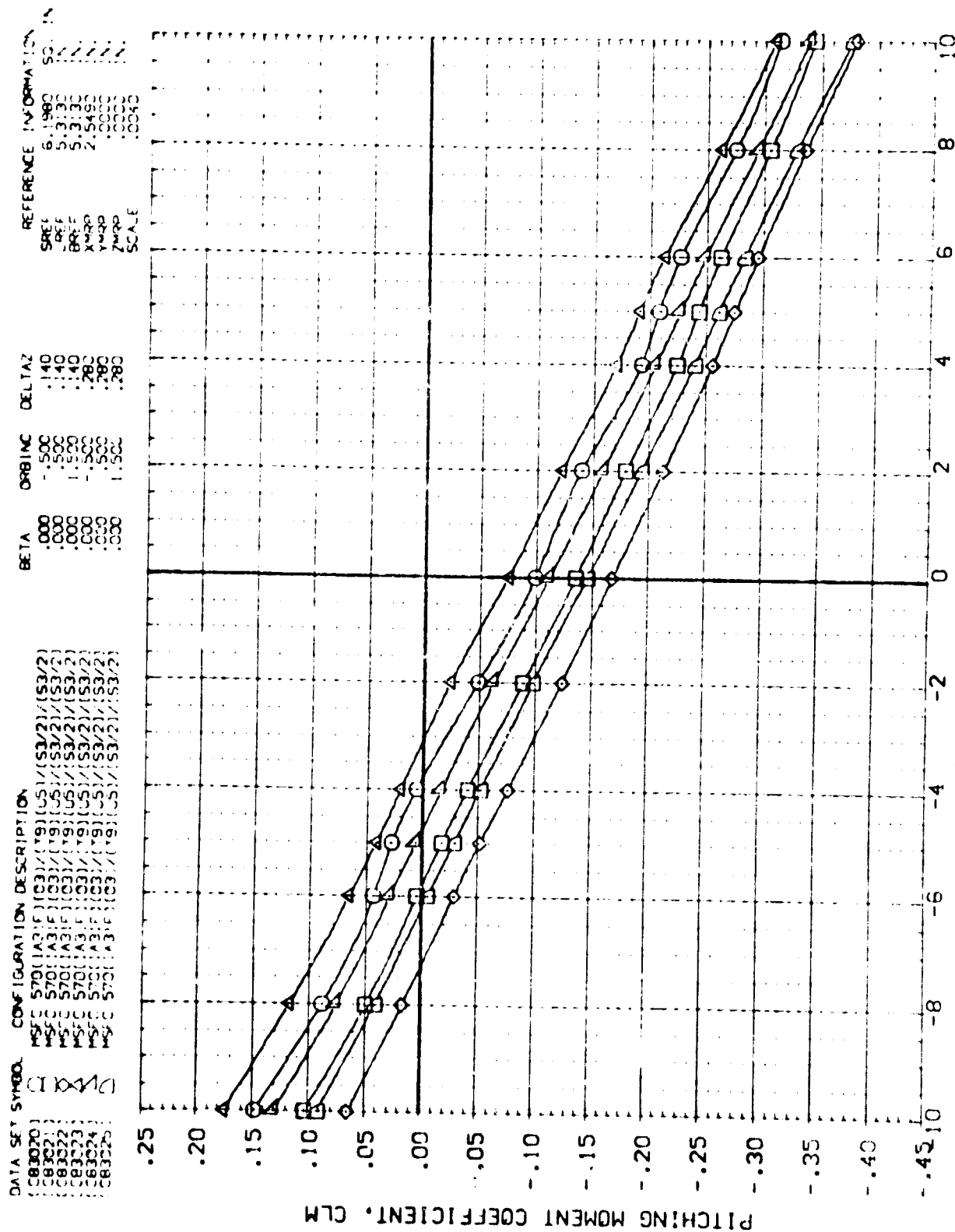
REFERENCE INFORMATION
 SREF 6.1960 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XREF 2.5480
 YREF .0000
 ZREF .0000
 SCALE .0040



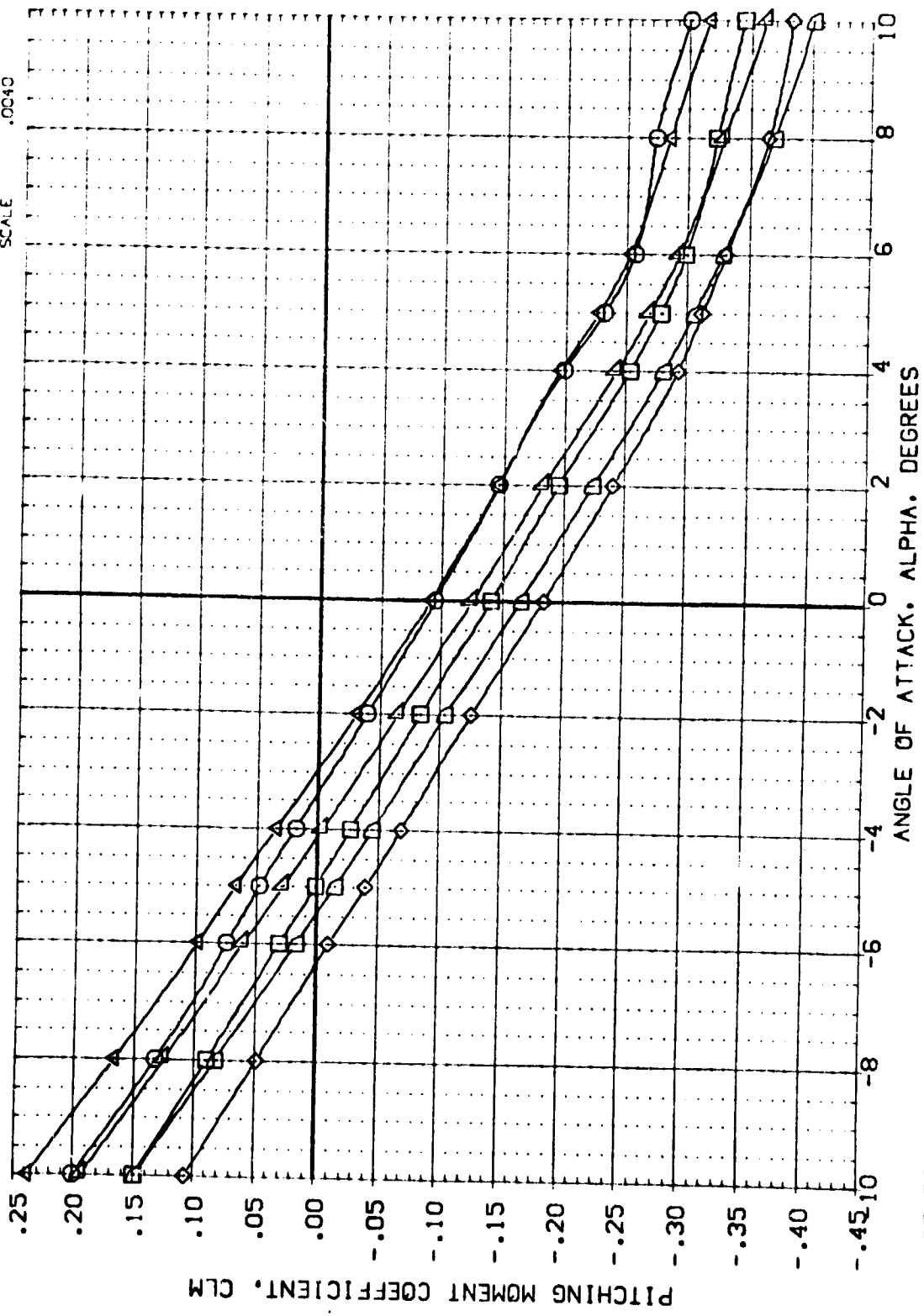
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A)MACH = .60

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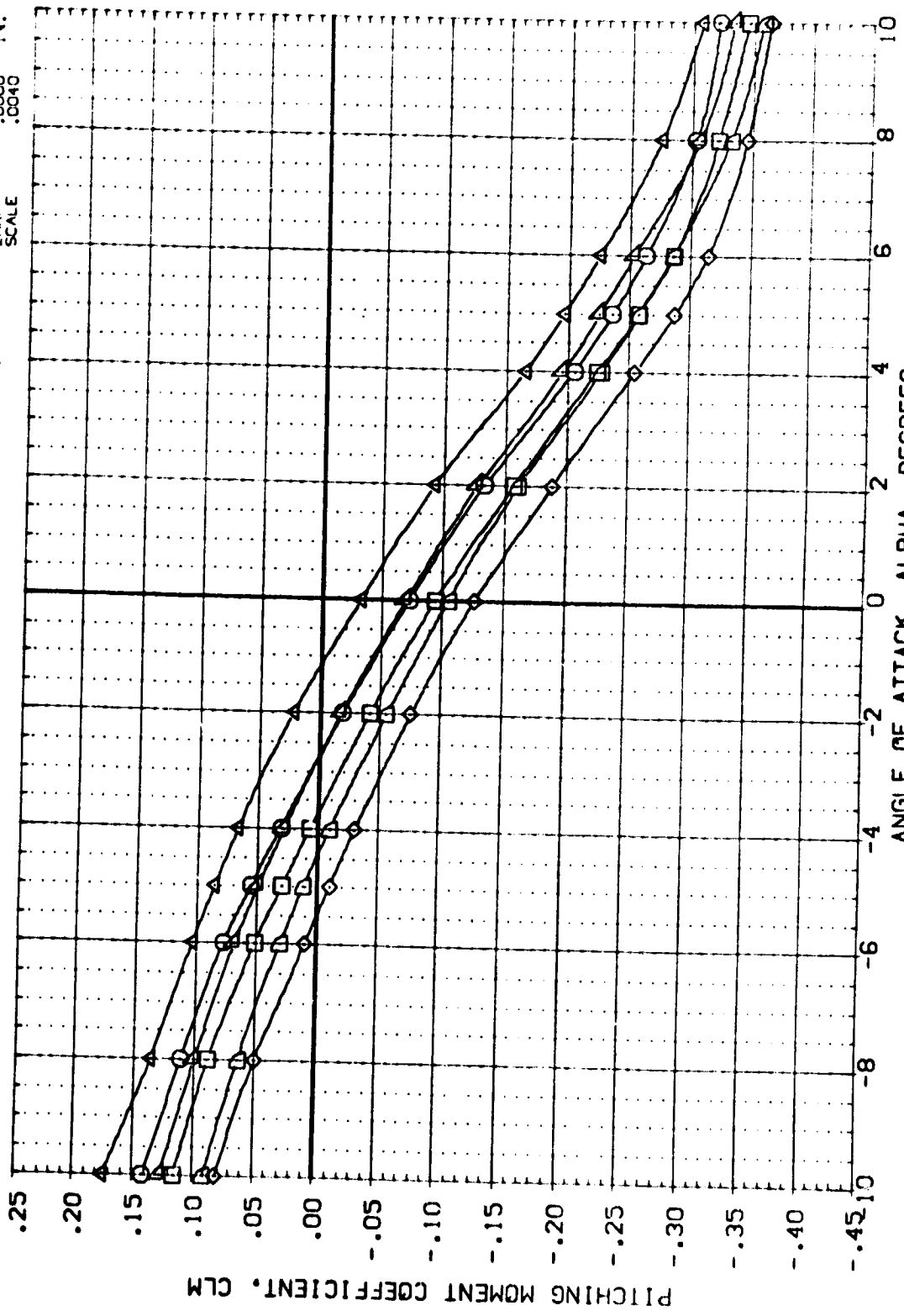


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83021)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83024)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



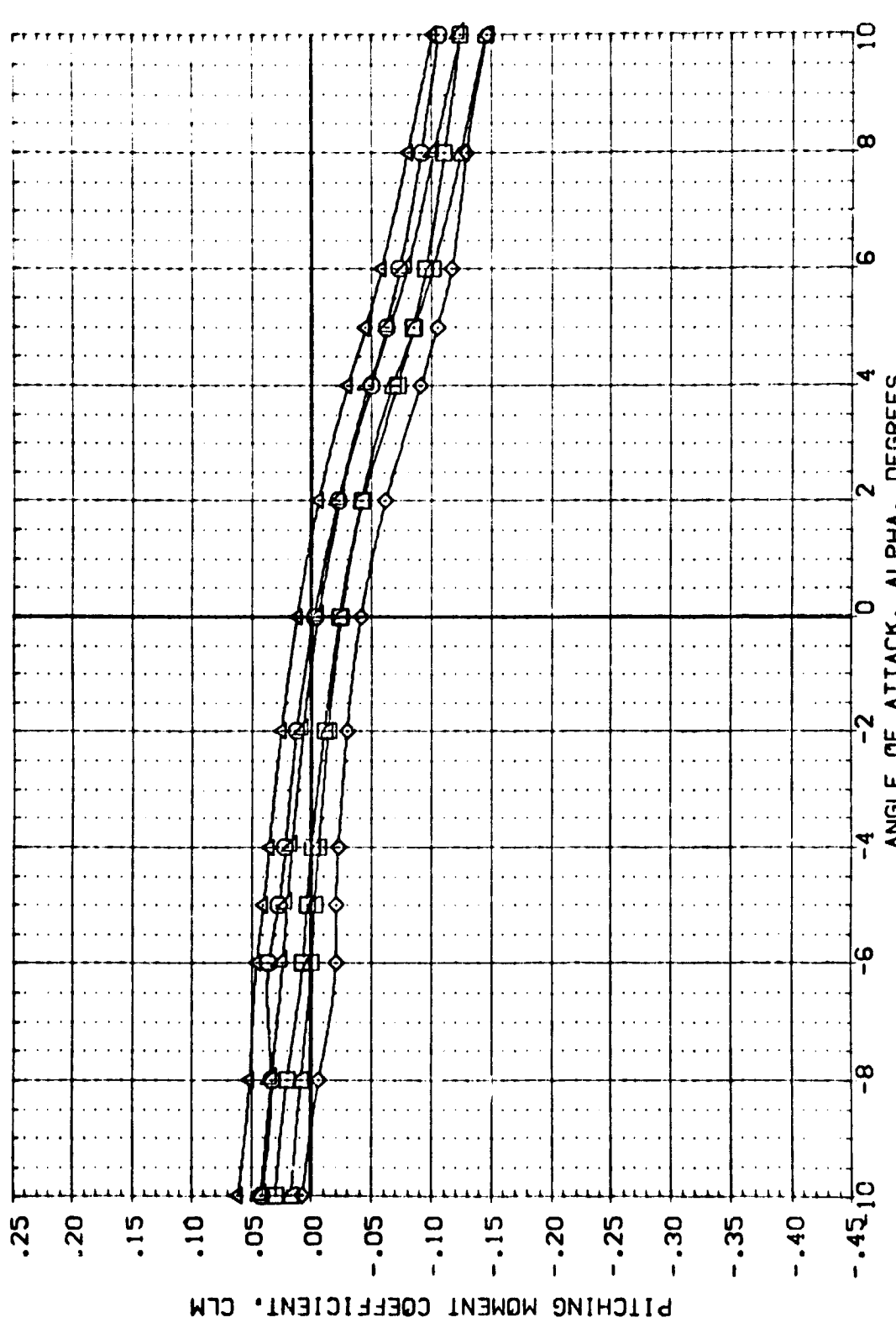
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)
 (C)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.1980 IN.
(C83021)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83024)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83025)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$
 (E)MACH = 1.97

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 5.1980 IN
(C83021)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	LREF 5.3130 IN
(C83022)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130 IN
(C83023)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP 2.5490 IN
(C83024)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.280	YMRP .0000 IN
(C83025)	MSFC 570((A3IF)(03)/(T9)(U5)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(F)MACH = 3.48

DATA SET SYMBO. CONFIGURATION DESCRIPTION

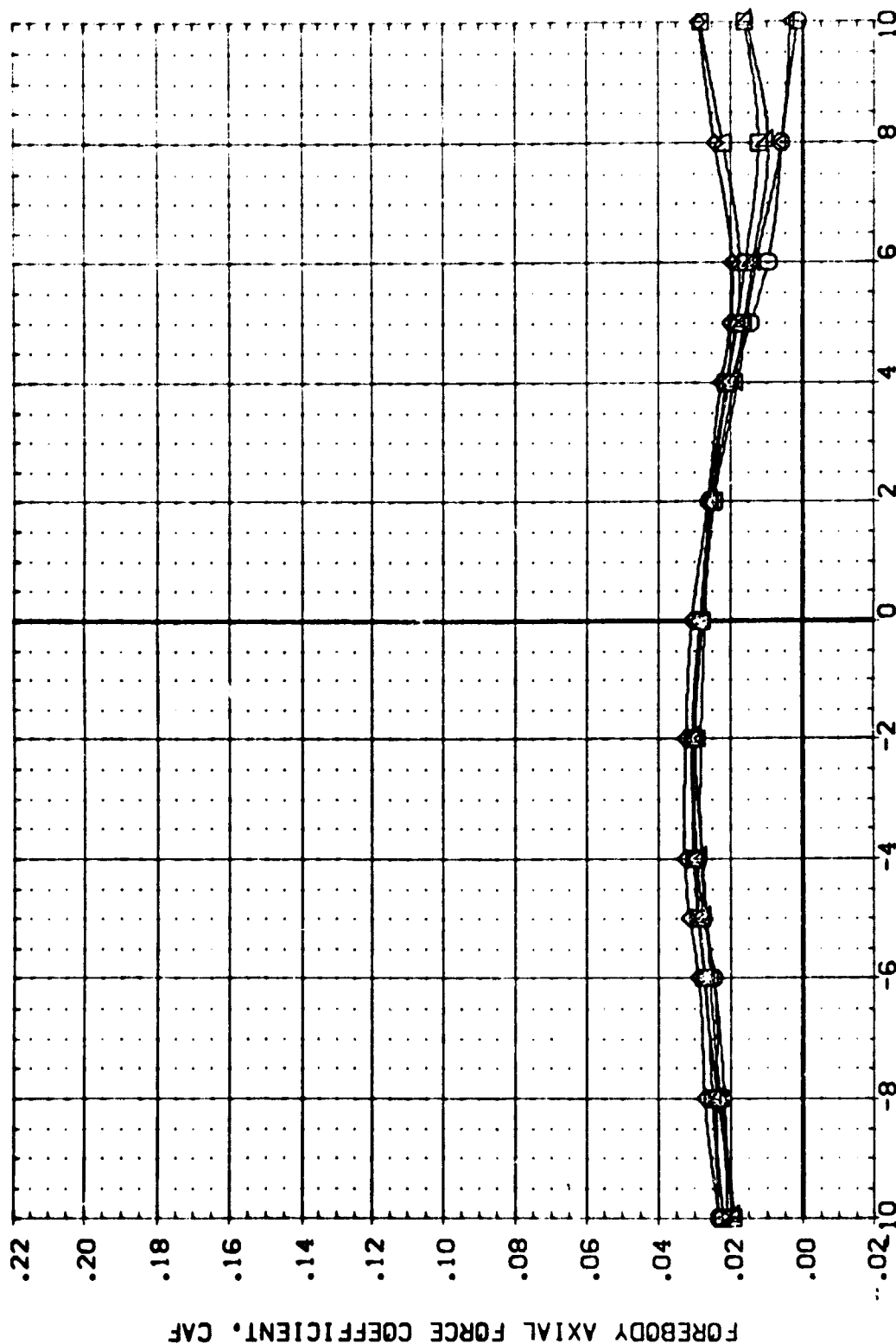
(C83020)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)
(C83021)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)
(C83022)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)
(C83023)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)
(C83024)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)
(C83025)	MSFC 570(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)

BETA ORB INC DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.280
.000	-.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO. IN.
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5490	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



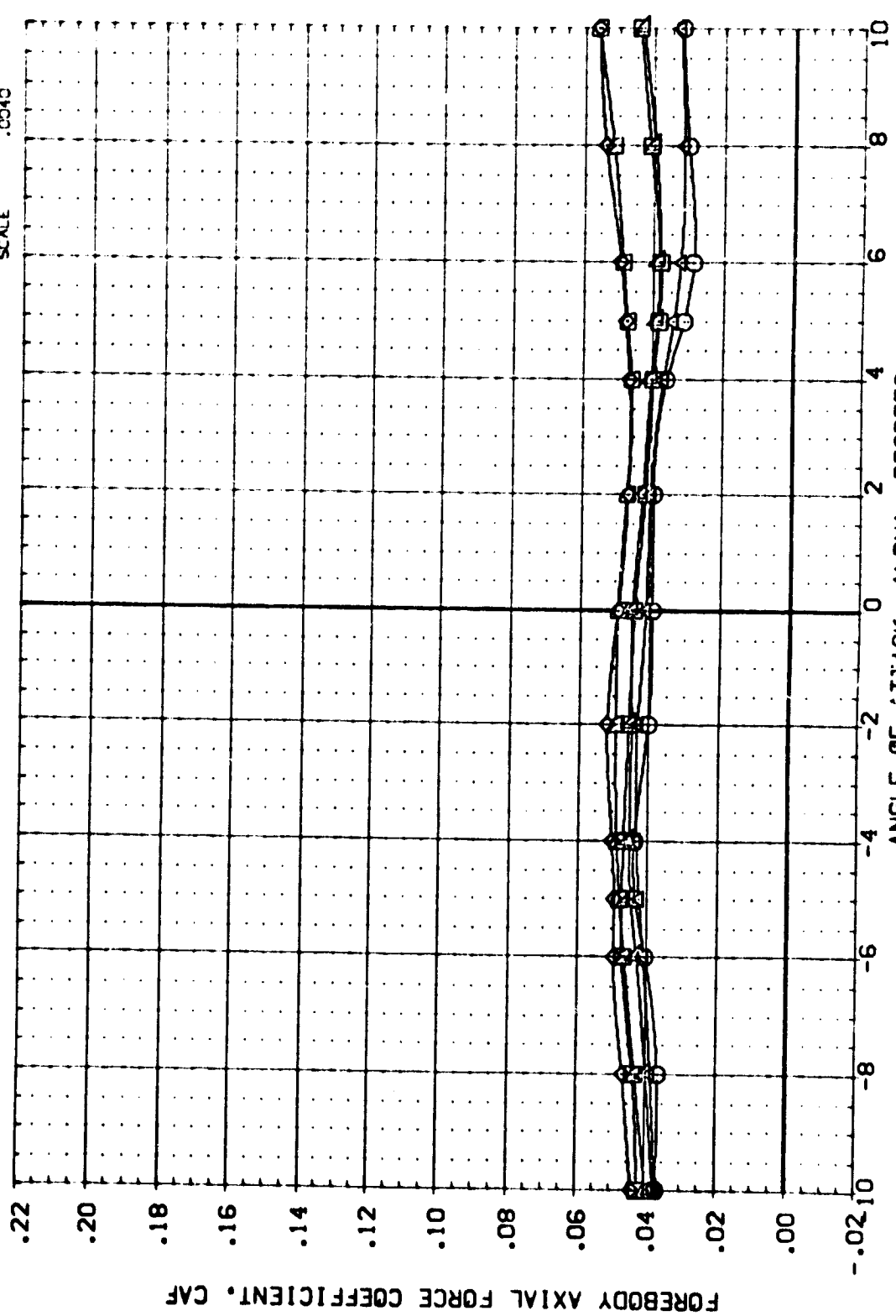
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A)MACH = .60

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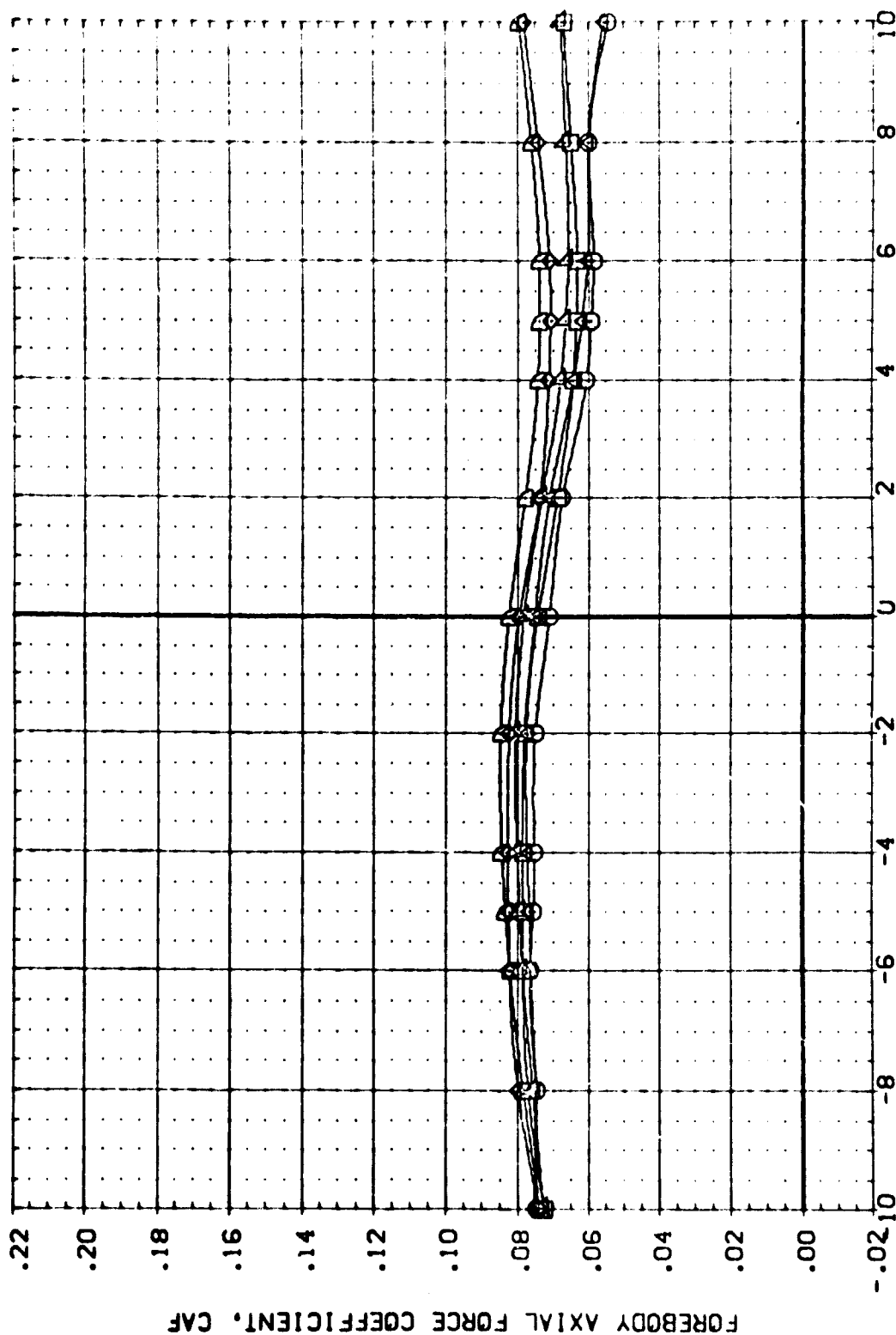


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83021)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83022)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	BREF 5.3130
(C83023)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5450
(C83024)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000
(C83025)	MSFC 570(IA3IF)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$
 (B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83021)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83024)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040

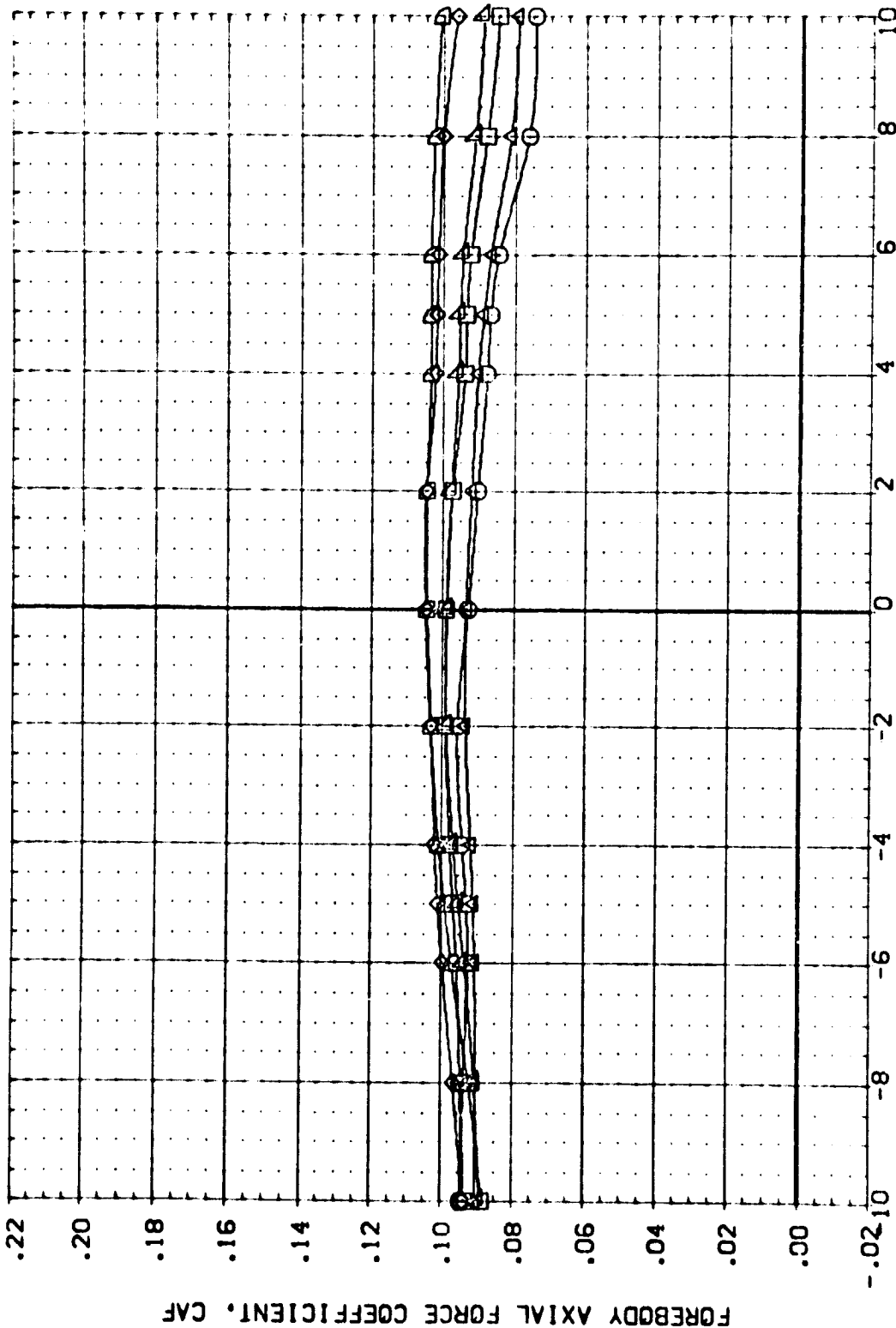


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(C)MACH = 1.05

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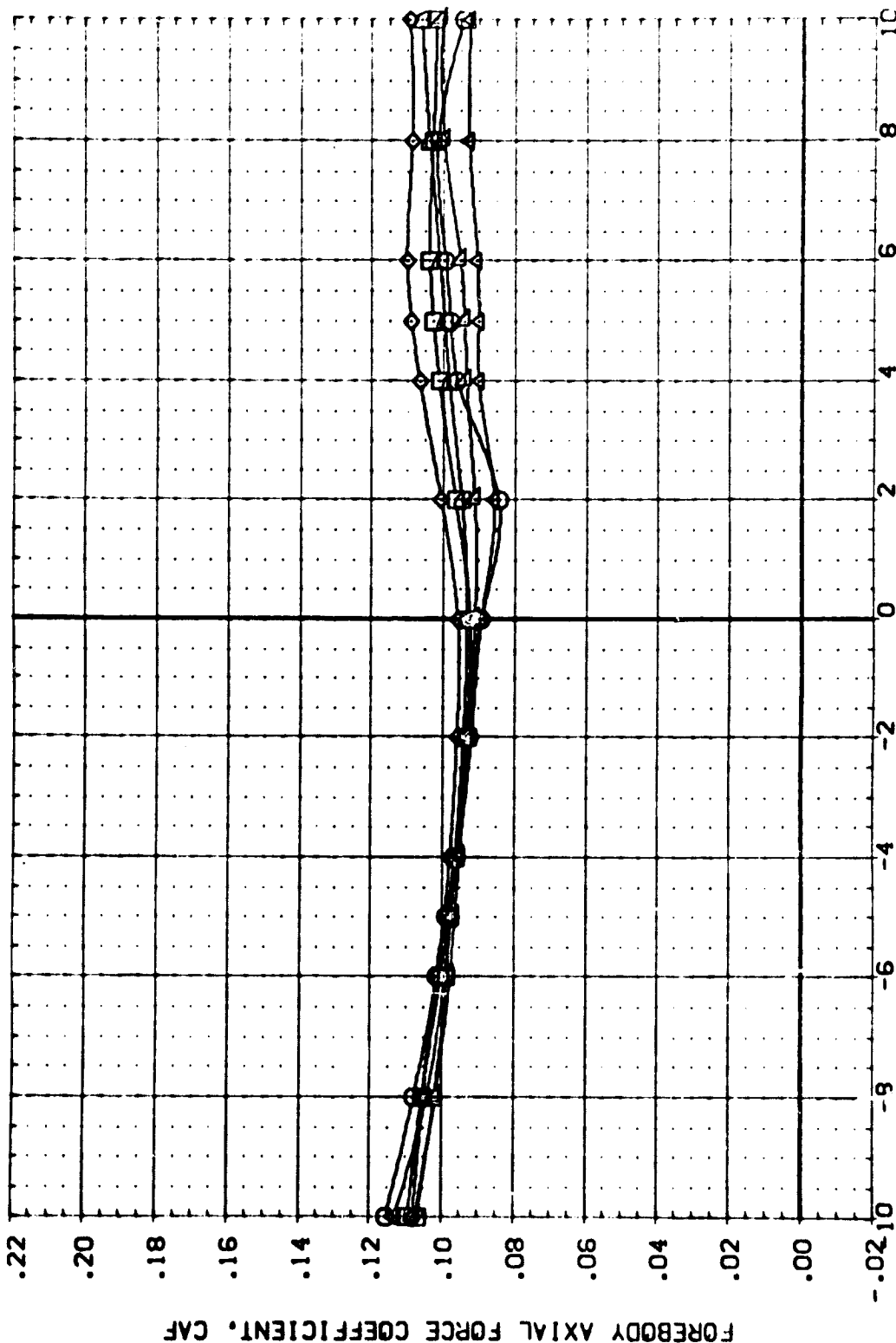
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
[C83020]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	-.500	.140	SREF 6.1980 IN
[C83021]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	.500	.140	LREF 5.3130 IN
[C83022]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	1.500	.140	GRF 5.3130 IN
[C83023]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	-.500	.280	XMRP 2.5490 IN
[C83024]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	.500	.280	YMRP .0000 IN
[C83025]	MSFC 570([A31F](03)/[T9](U5)/[S3/2]/[S3/2])	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/[S3/2]/[S3/2]

(0)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DF, TAZ	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83024)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83025)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



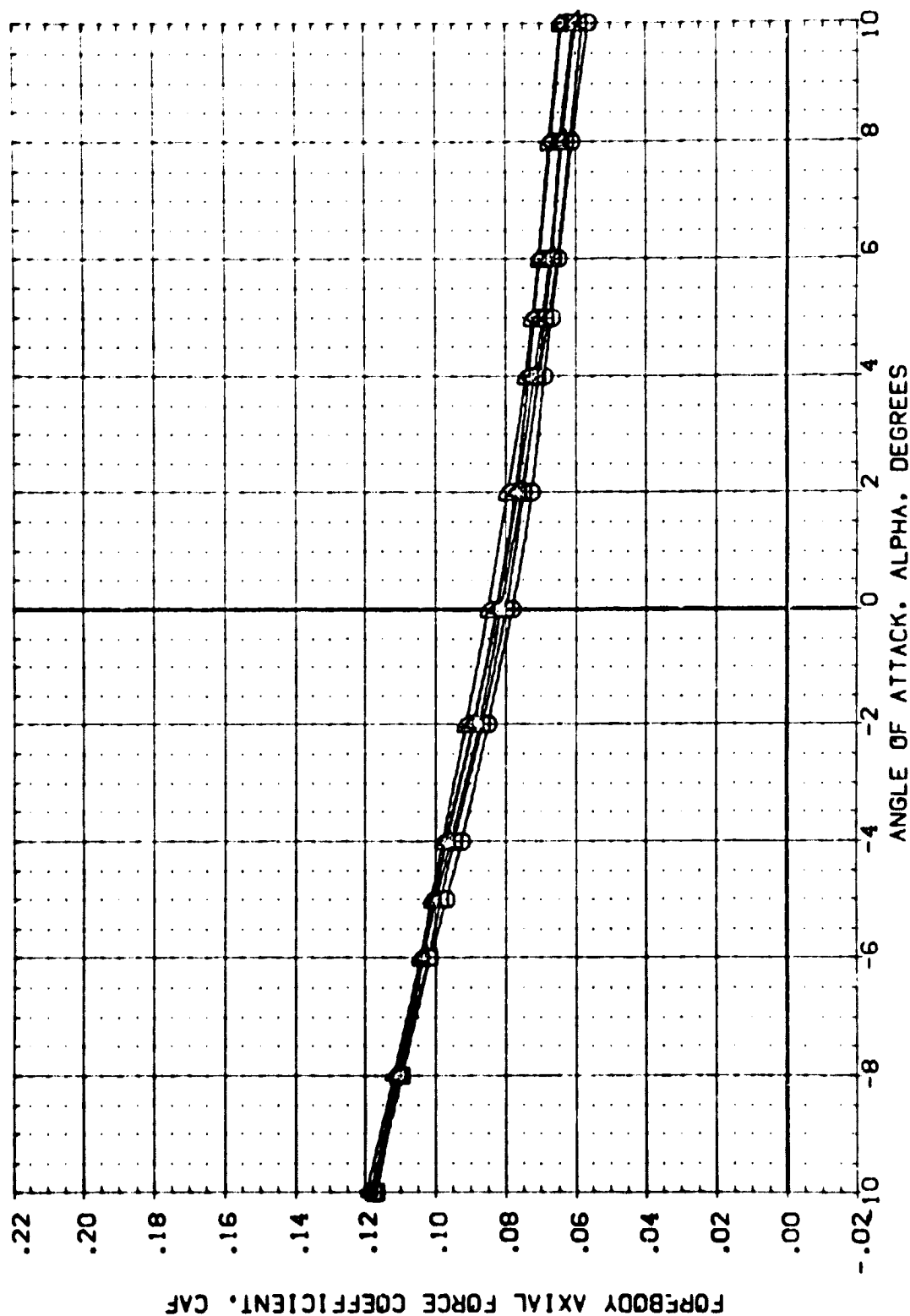
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(E)MACH = 1.97

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	- .500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	- .500	.280	XMRP 2.5450
(C83024)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570 (A31F) (03) (T9) (U5) / (S3/2) / (S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$

(F)MACH = 3.48

DATA SET SYMBOL

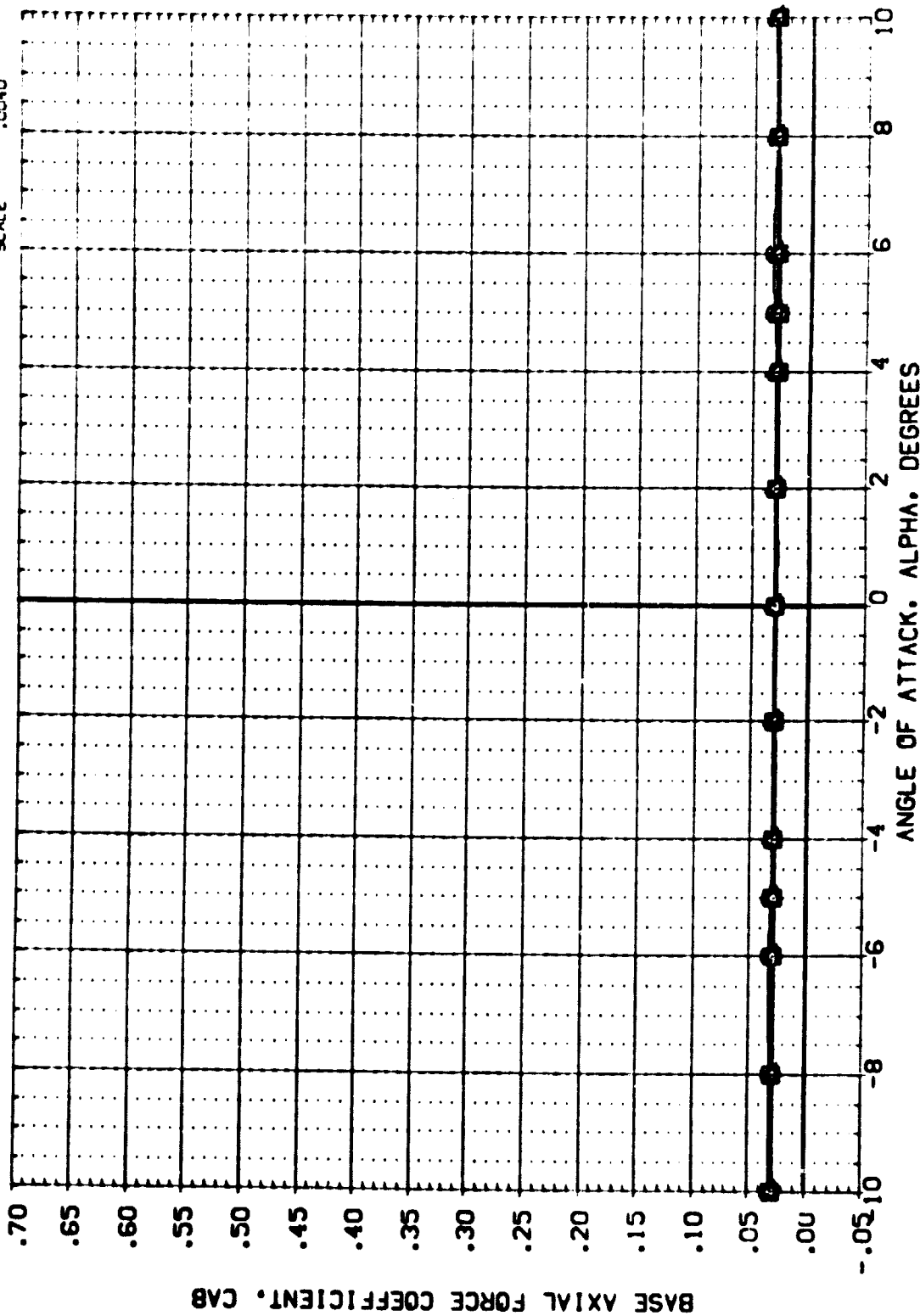
CONFIGURATION DESCRIPTION

MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
 MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
 MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
 MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
 MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)

BETA
 .000
 .000
 .000
 .000
 .000

ORBITAL DELTA Z
 .500
 .500
 .500
 .500
 .500

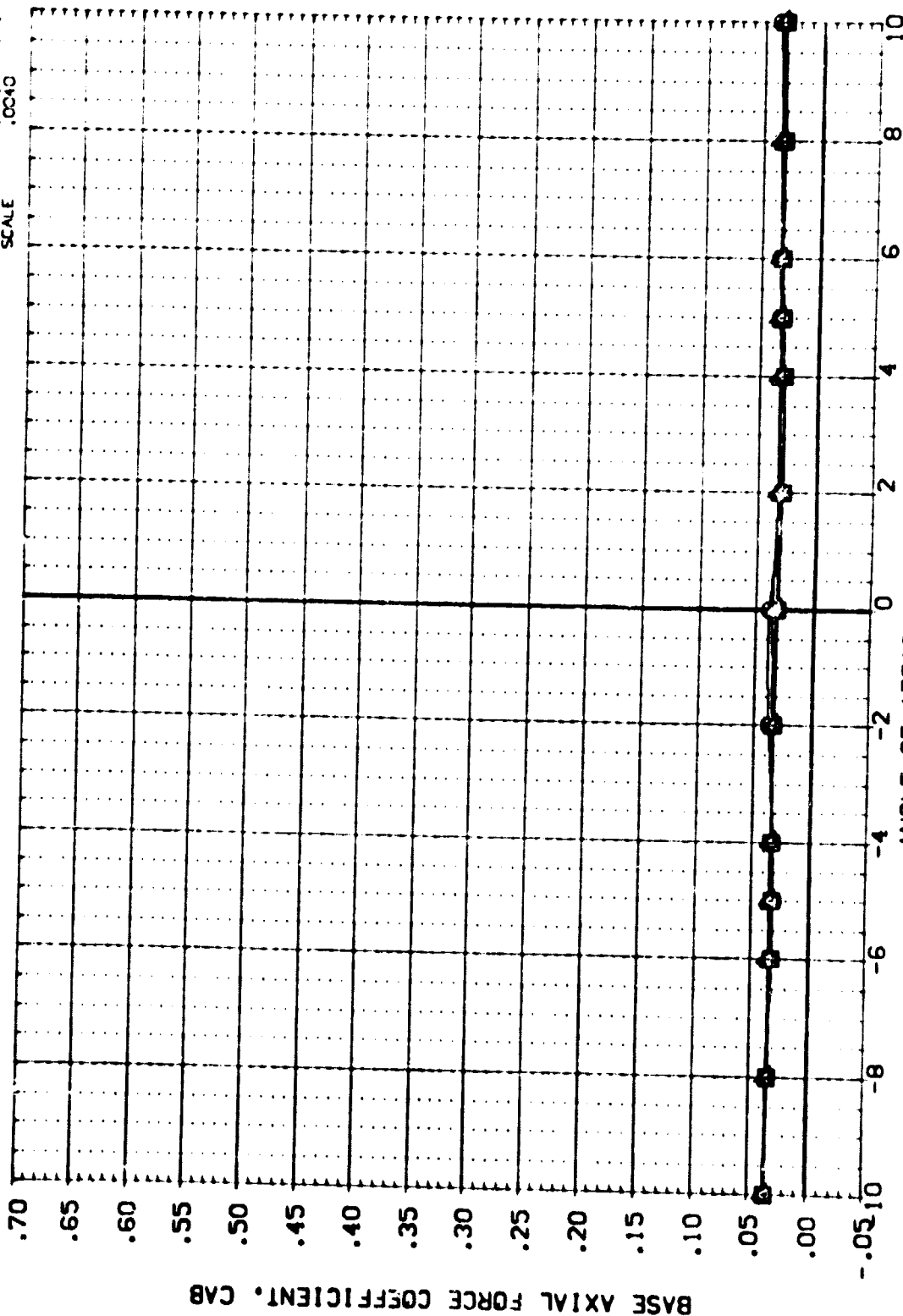
REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A)MACH = .60

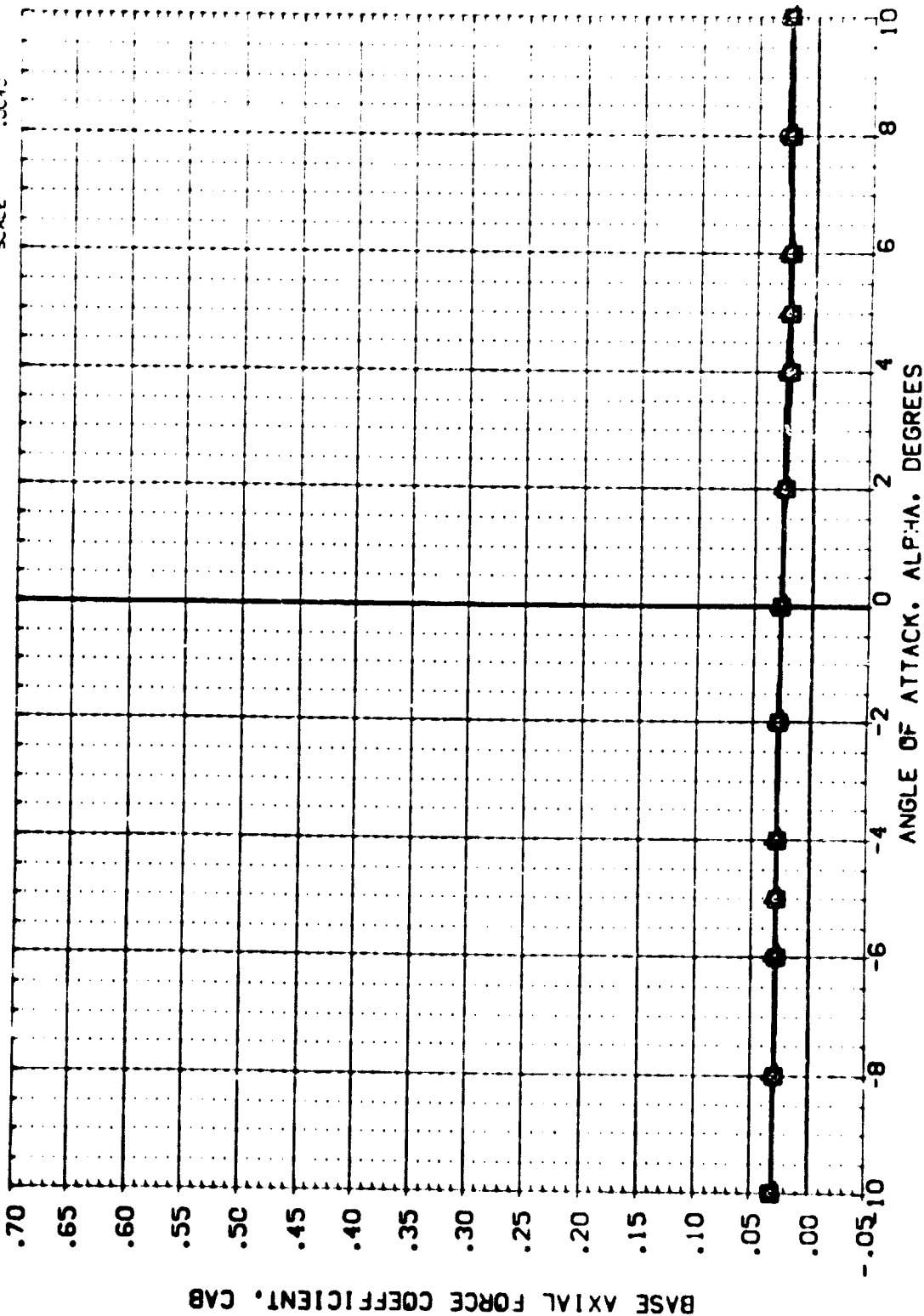
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1960
(C83021)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP 2.5490
(C83024)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570((A31F)(031)/(T9)(U5)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SC. IN
(C83021)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83022)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XPROP 2.0000
(C83024)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YPROP 2.0000
(C83025)	M5FC 570(I A3IF103)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZPROP 2.0000
					SCALE .0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$

(COMACH = 1.05



DATA SET SYMBOL CONFIGURATION DESCRIPTION

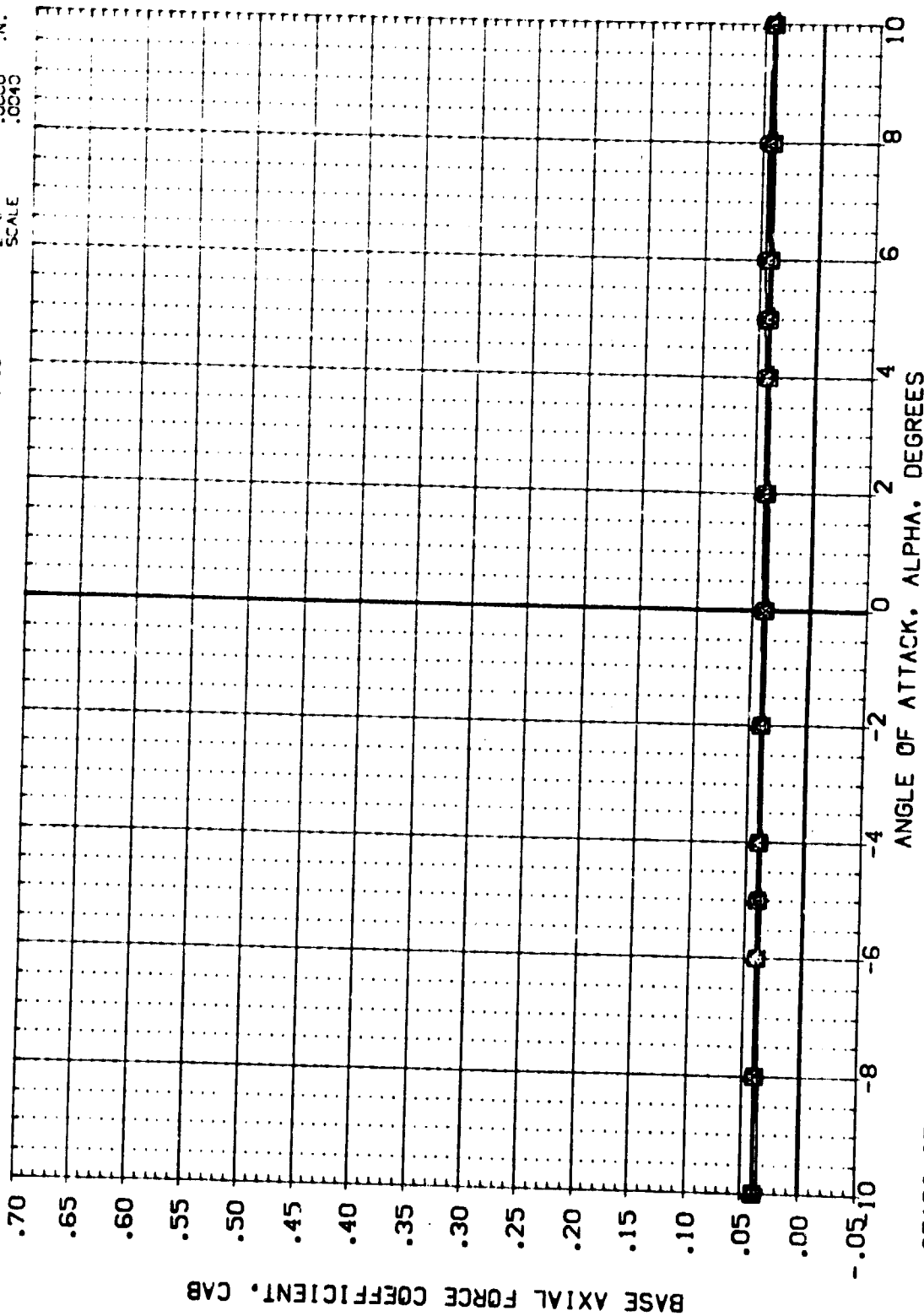
MSFC 570((IA3IF)(03)(T9)(U5)/(S3/2)/(S3/2))
 MSFC 570((IA3IF)(03)(T9)(U5)/(S3/2)/(S3/2))
 MSFC 570((IA3IF)(03)(T9)(U5)/(S3/2)/(S3/2))
 MSFC 570((IA3IF)(03)(T9)(U5)/(S3/2)/(S3/2))
 MSFC 570((IA3IF)(03)(T9)(U5)/(S3/2)/(S3/2))

BETA ORBINC DELTAZ

.000 -.500 .140
 .000 -.500 .140
 .000 1.500 .140
 .000 -.500 .280
 .000 -.500 .280
 .000 1.500 .280

REFERENCE INFORMATION

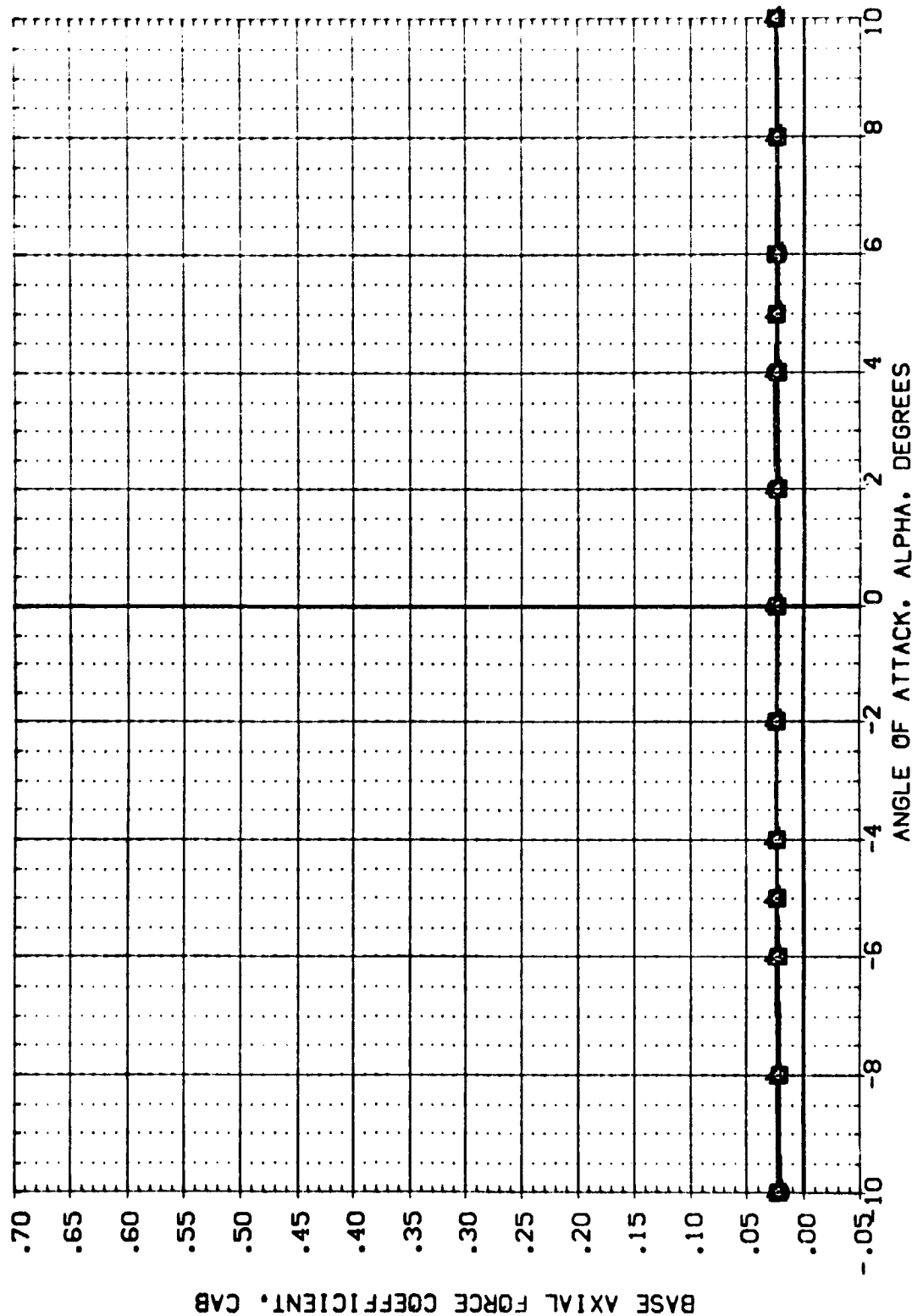
SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(D)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.000	.140	SREF 6.1980
(C83021)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5450
(C83024)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
(C83025)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



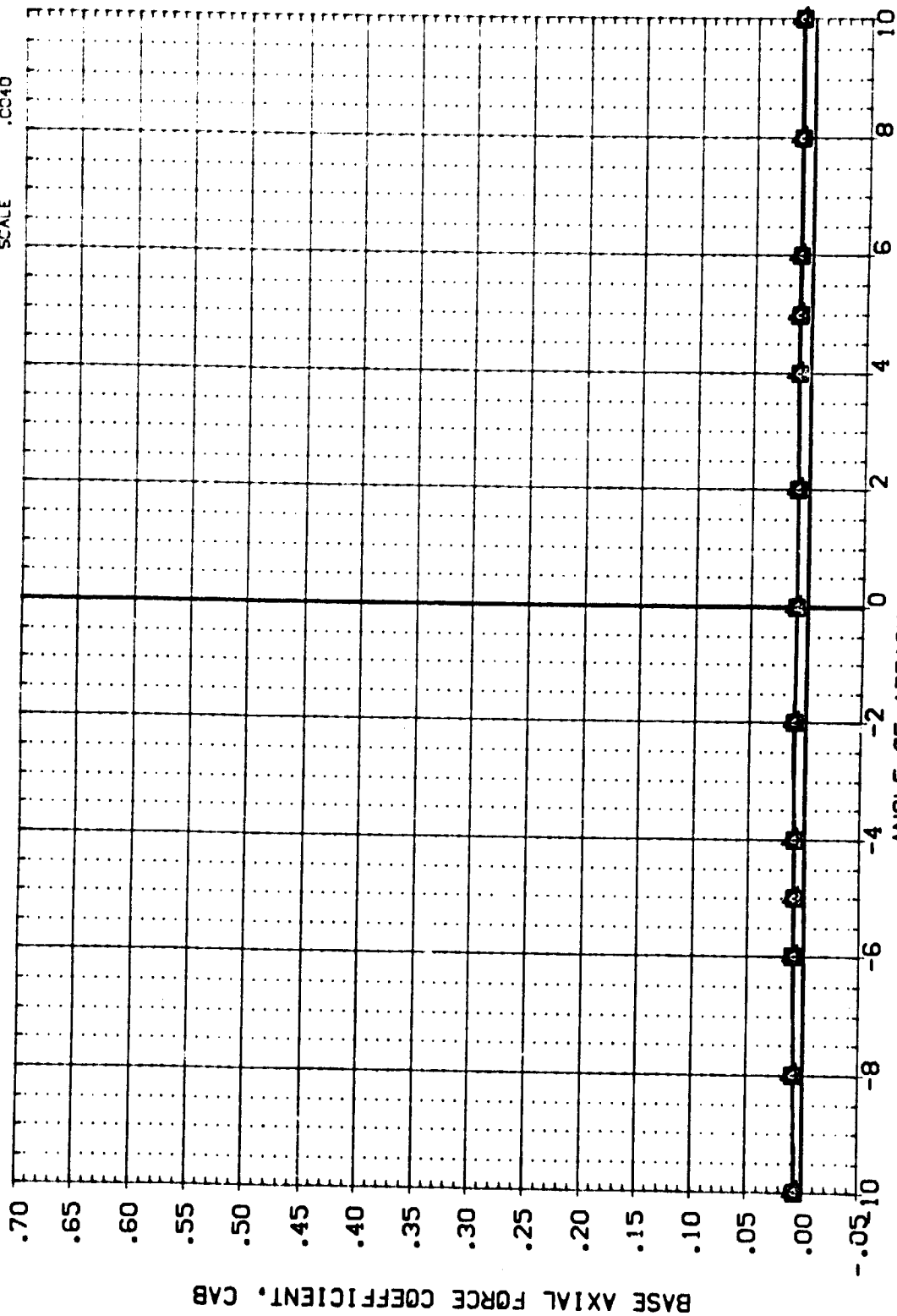
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(E)MACH = 1.97

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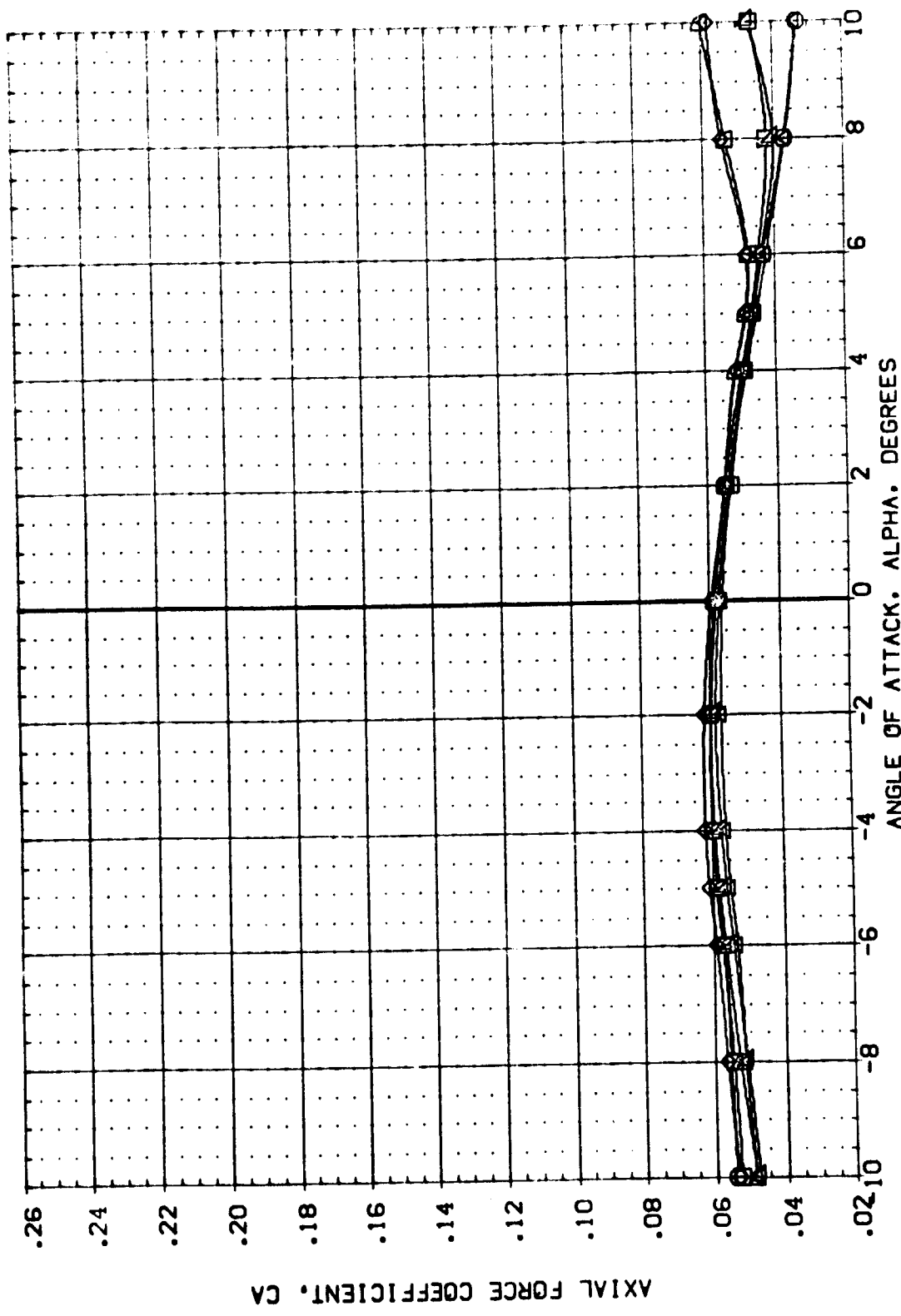
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 IN.
(C83021)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 IN.
(C83024)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
(C83025)	MSFC 570(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(F)MACH = 3.48

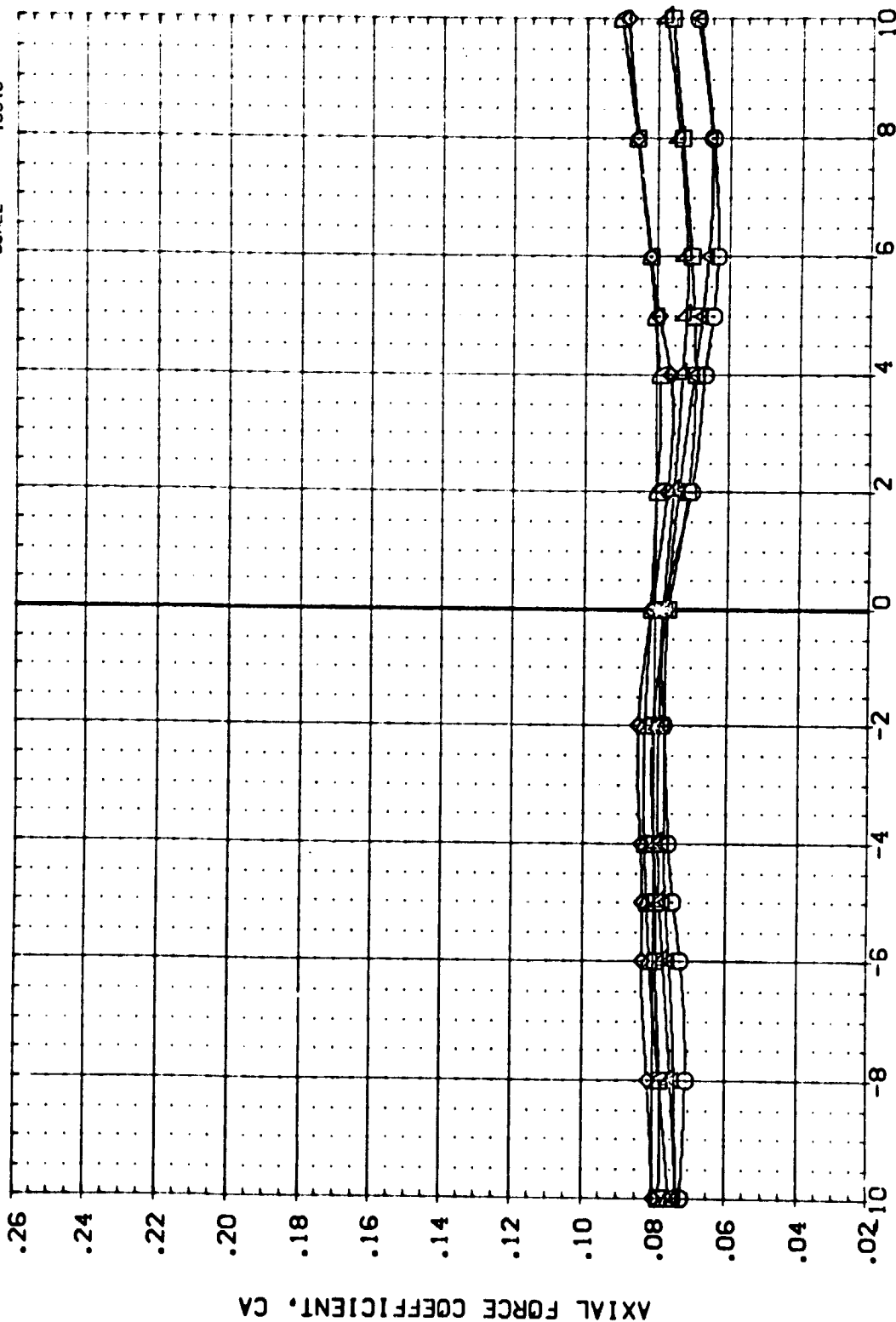
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83021)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83024)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A)MACH = .60

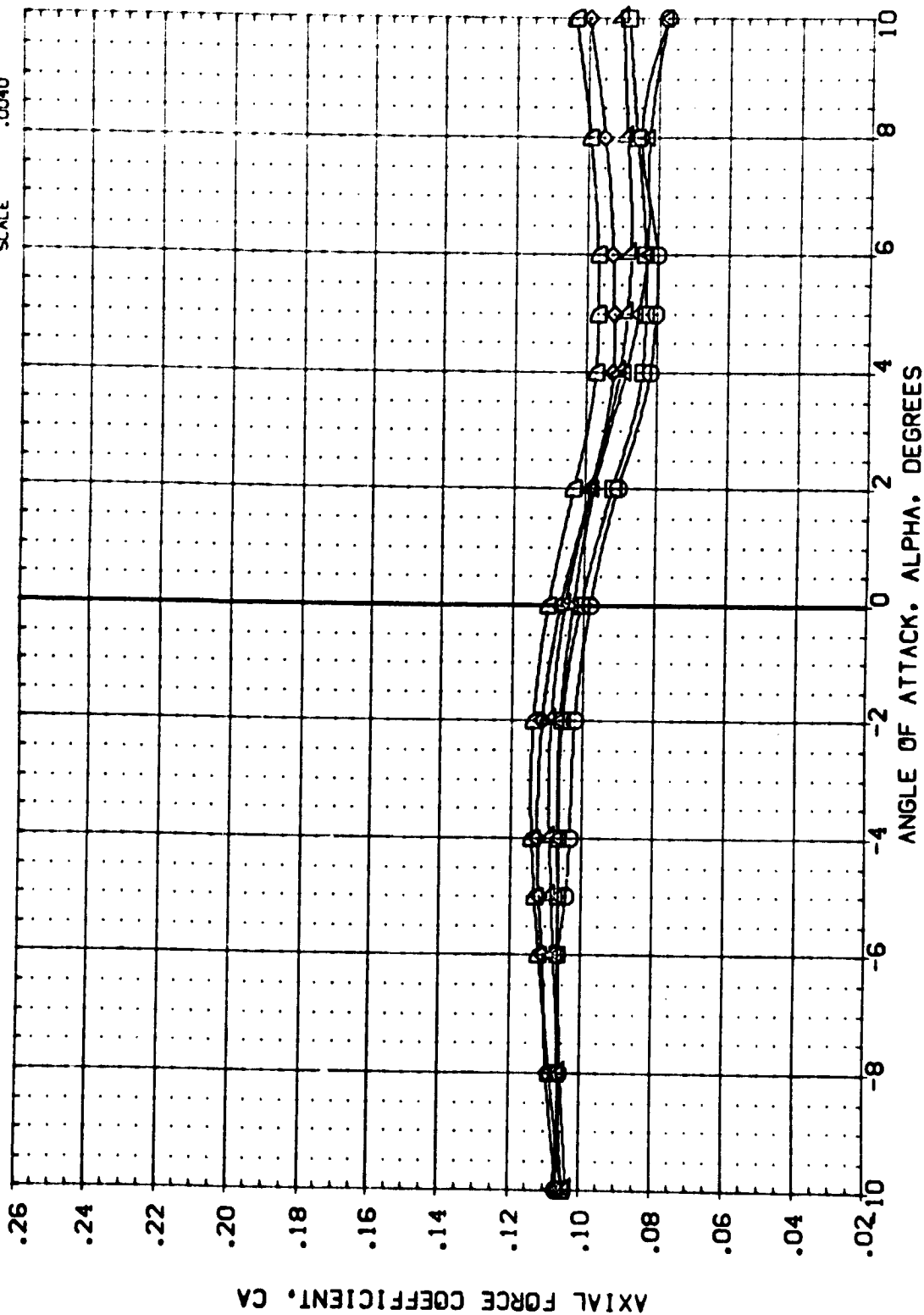
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83021)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83024)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83025)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(B)MACH = .90

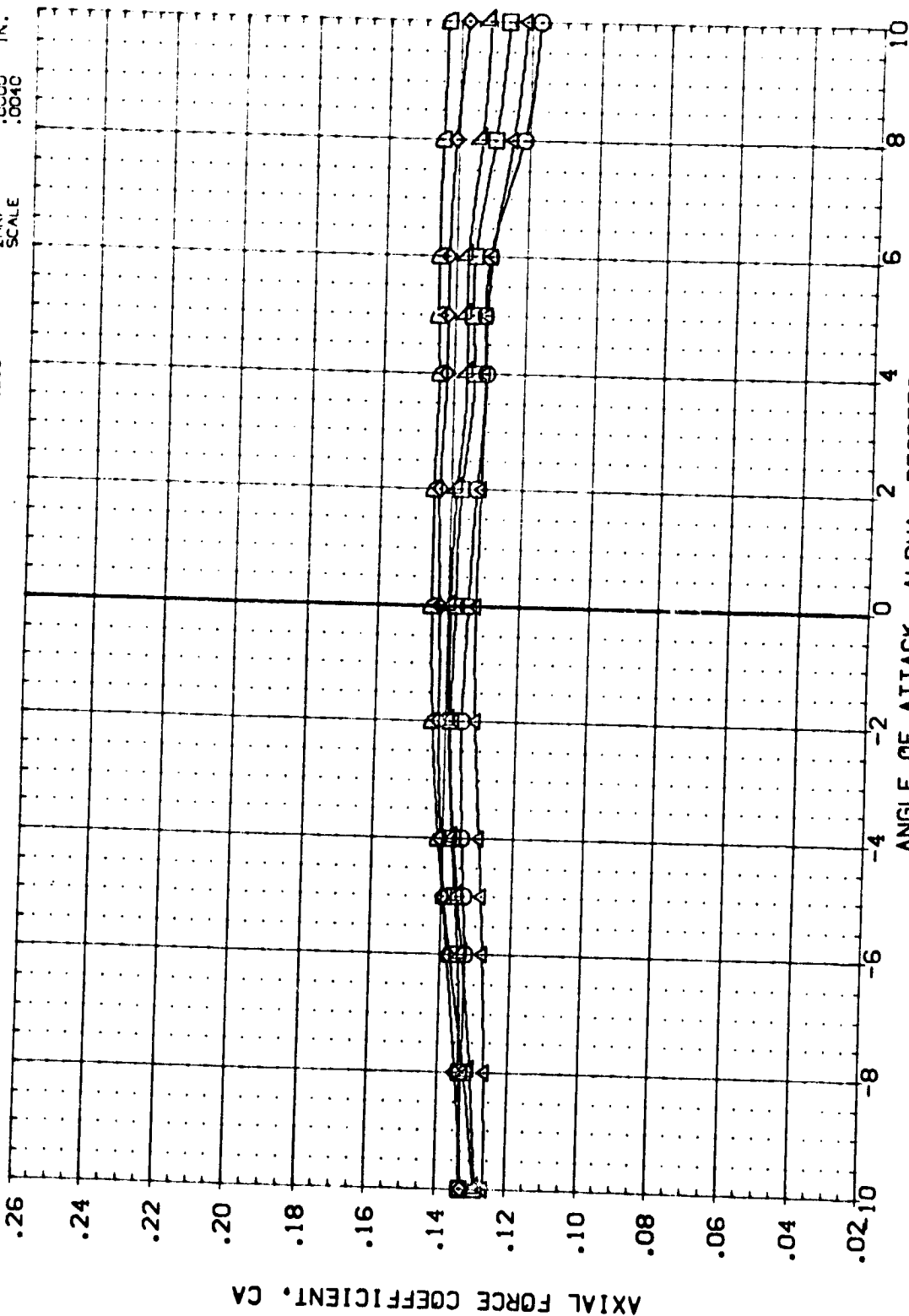
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83022)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83023)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83024)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83025)	MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040



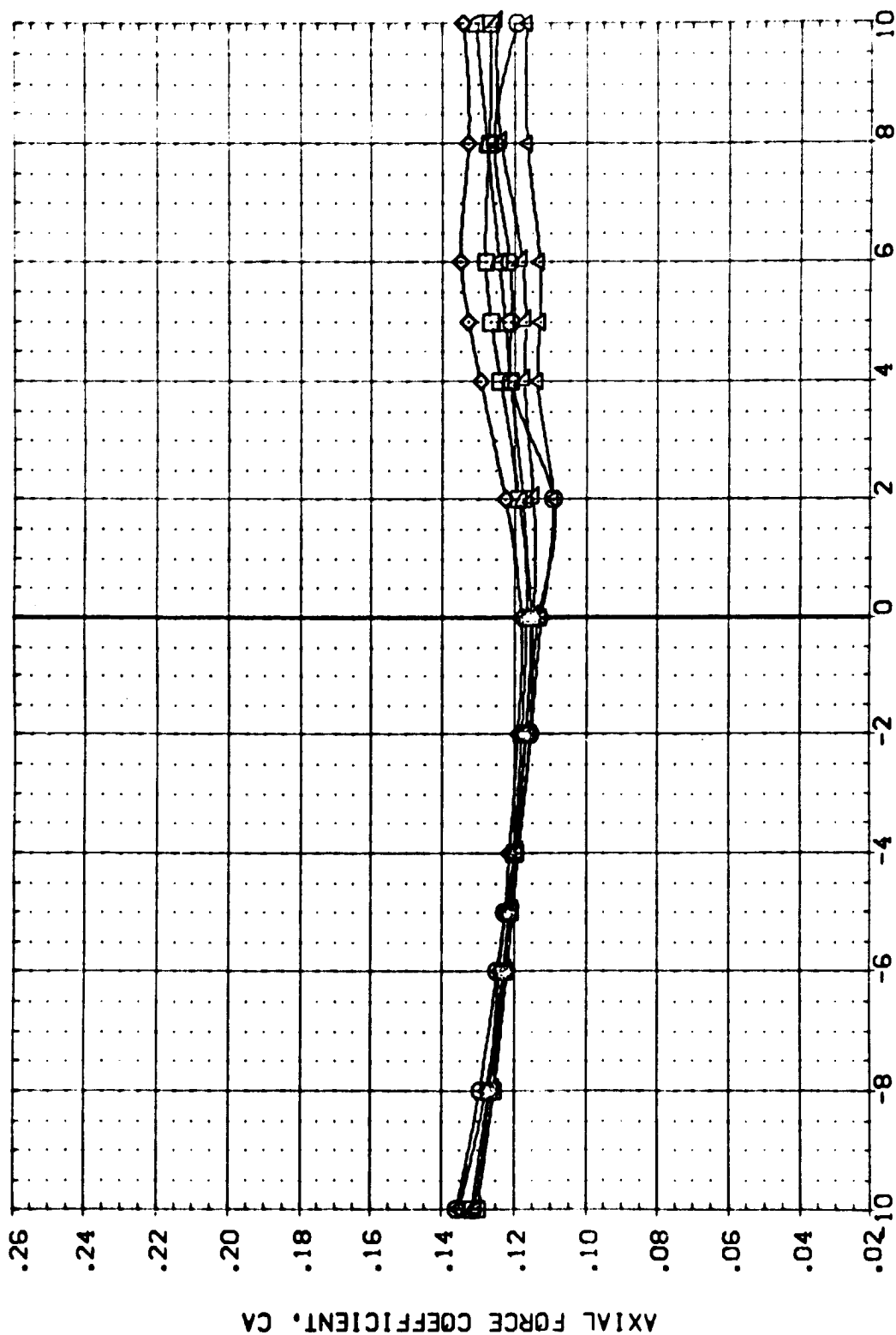
STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.140	LREF 5.3130 IN.
(C83022)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.140	BREF 2.5490 IN.
(C83023)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.280	XMRP .0000 IN.
(C83024)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.280	YMRP .0000 IN.
(C83025)	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-500	.280	ZMRP .0000 IN.
					SCALE .0040



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	-.500	.140	SREF 6.1980
(C83021)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	-.500	.280	XMRP 2.5490
(C83024)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570((A3IF)(03)/((T9)(U5)/((S3/2)/((S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040

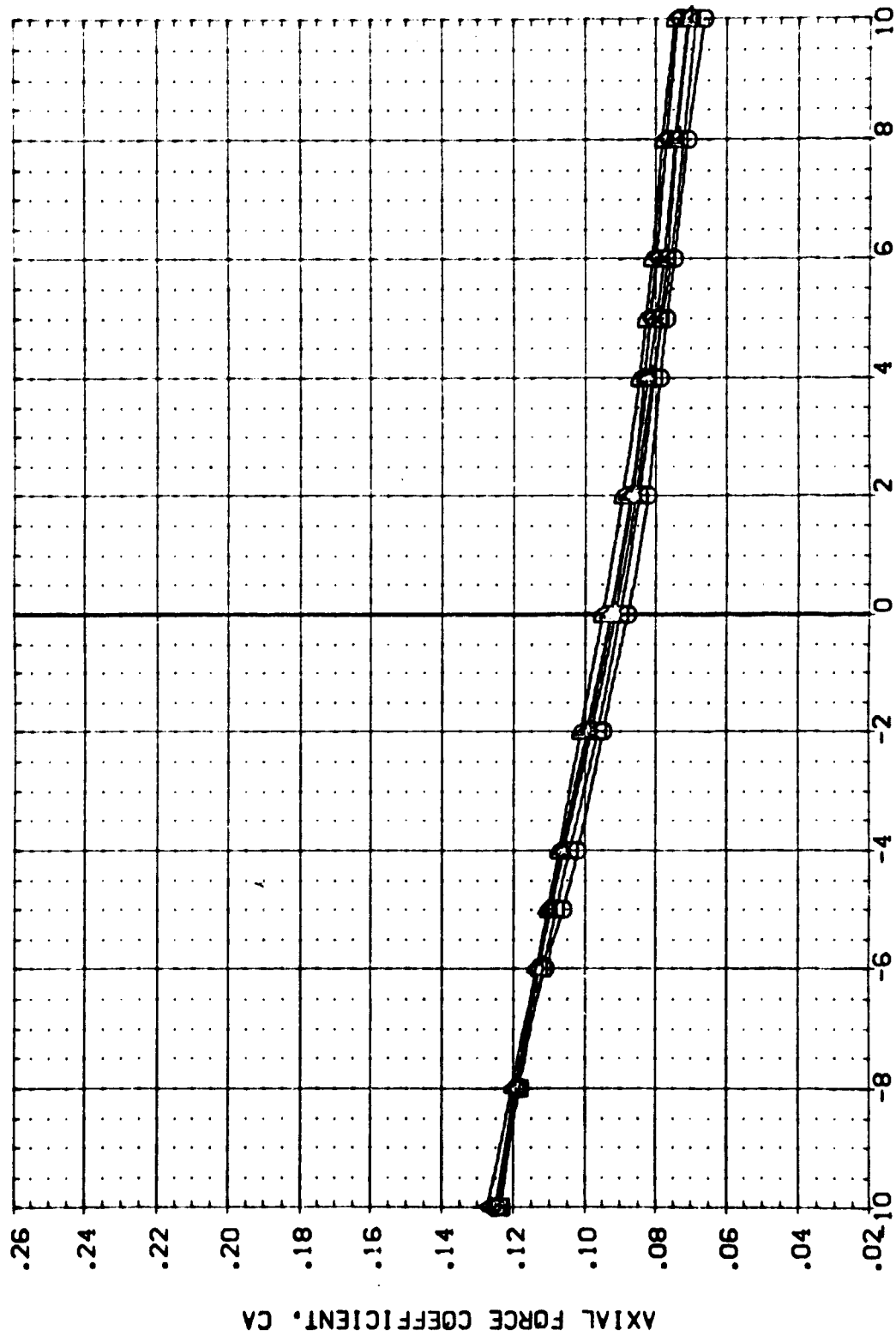


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/((S3/2)/((S3/2)

(E)MACH = 1.97

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[C83020]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
[C83021]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
[C83022]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
[C83023]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5450 IN
[C83024]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
[C83025]	MSFC 5701(A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0010

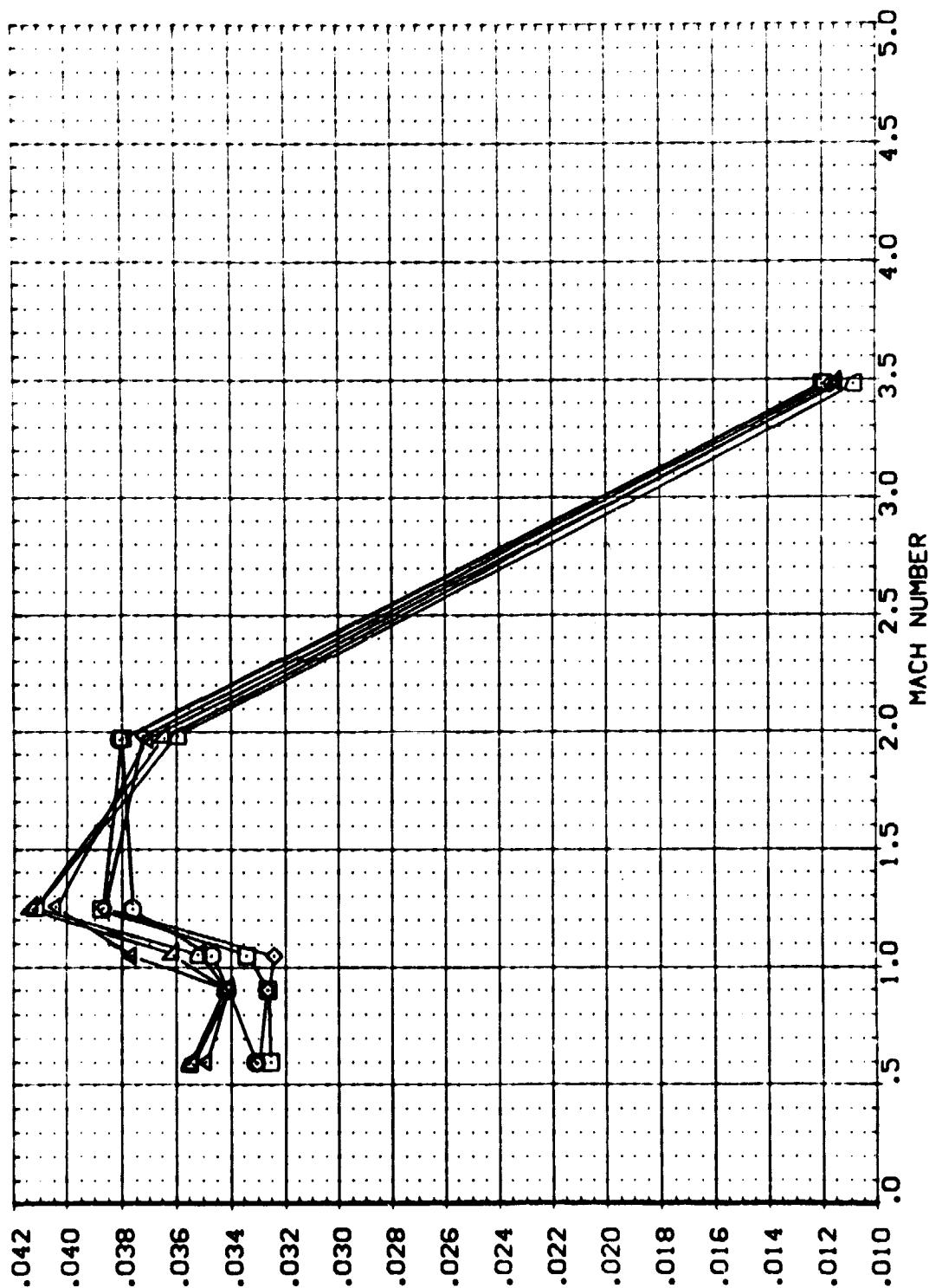


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(F)MACH = 3.48

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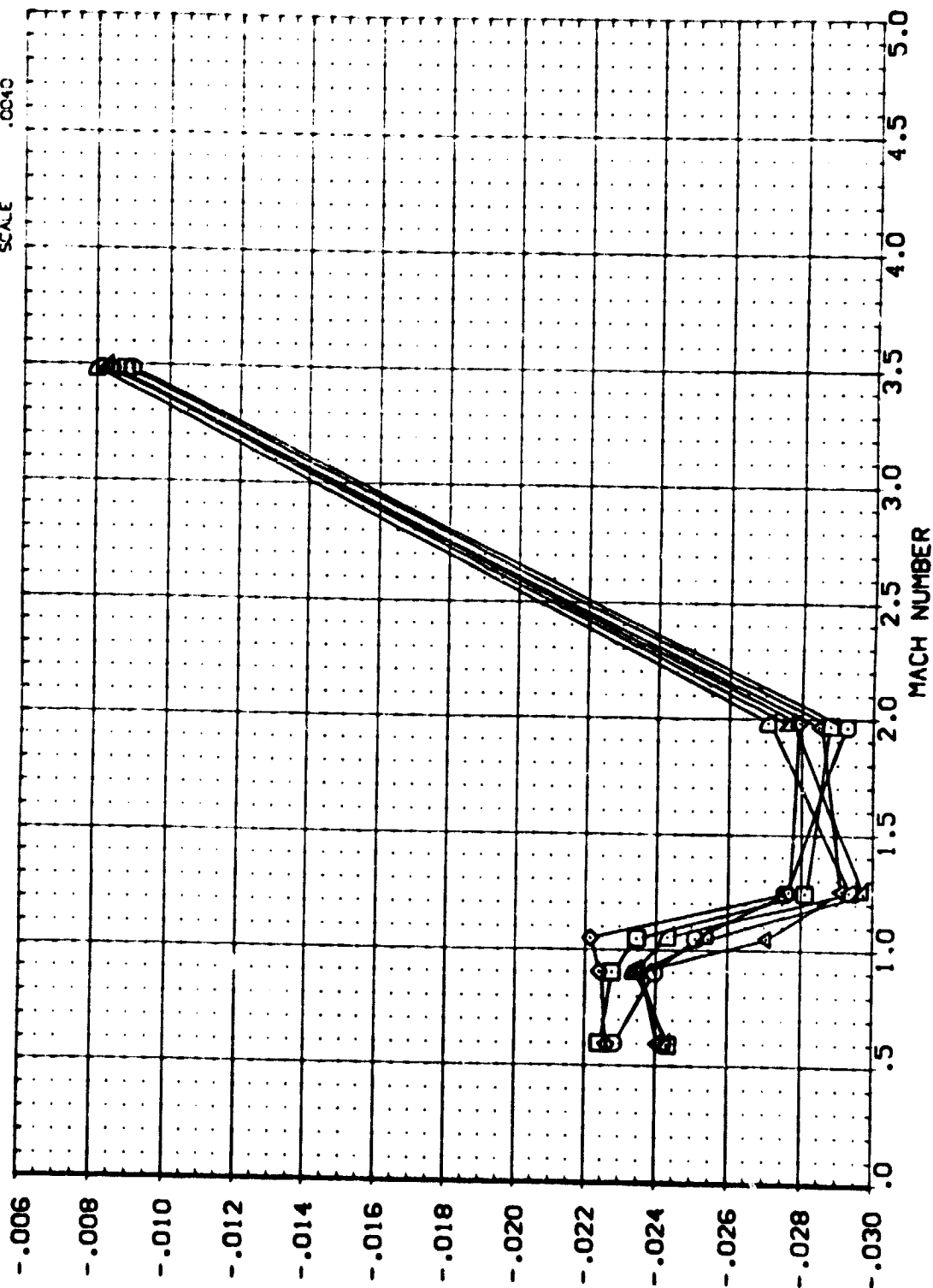
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83021)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83022)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83023)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83024)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000
(C83025)	MSFC 570(IA3IF)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL INC	DELTA Z	REFERENCE INFORMATION
[C83020]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
[C83021]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
[C83022]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
[C83023]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
[C83024]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	-.500	.280	YMRP .0000 IN.
[C83025]	MSFC 570([A31F])(03)/([T9])(U5)/([S3/2])(S3/2)	.000	1.500	.280	ZMRP .0000 IN.

PITCHING MOMENT COEFFICIENT DERIVATIVE WITH ALPHA, CLM/F, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$

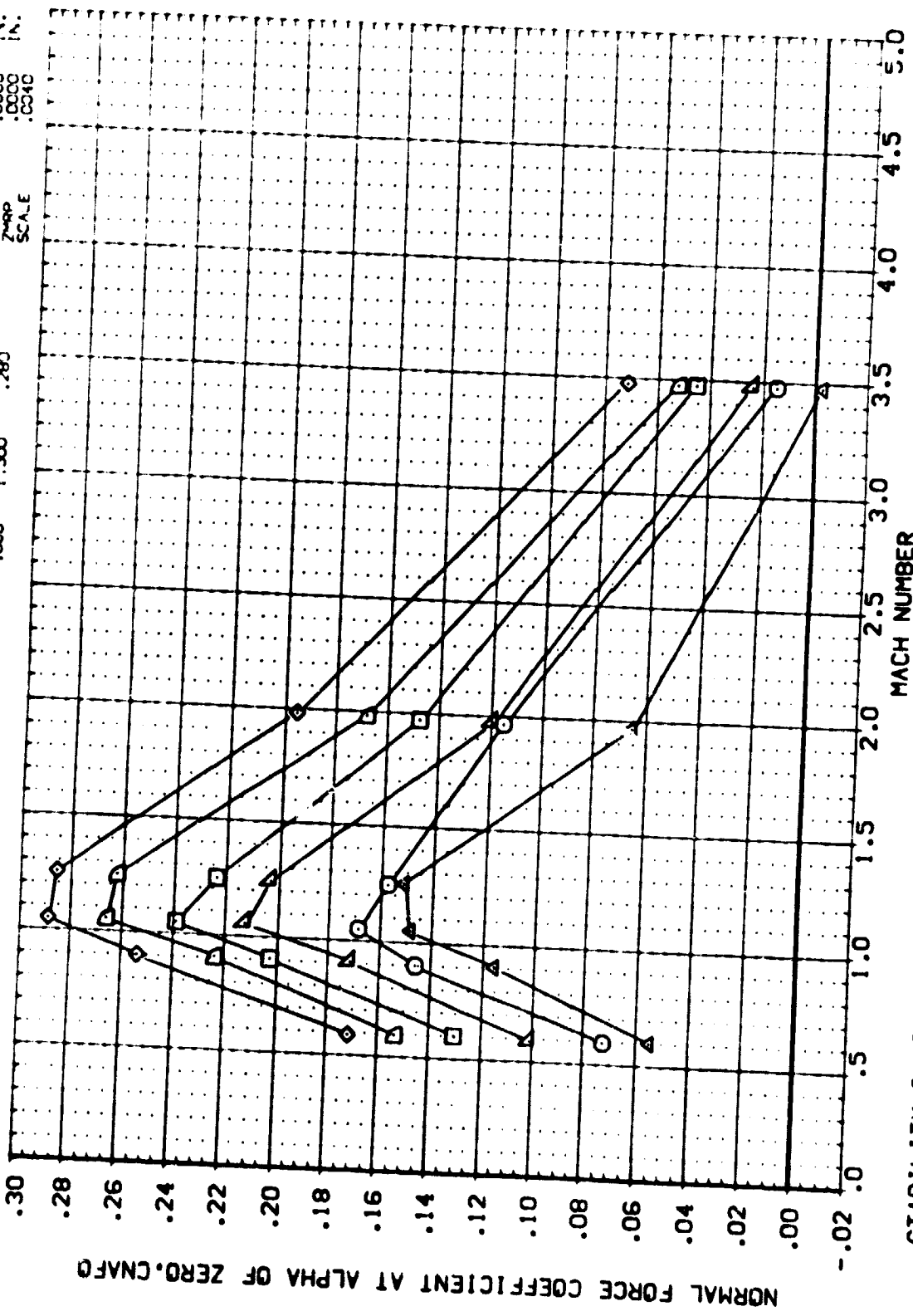
DATA SET SYMBO. CONFIGURATION DESCRIPTION

(C83020) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))
 (C83021) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))
 (C83022) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))
 (C83023) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))
 (C83024) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))
 (C83025) MSFC 570((A31F)(03)/((T9)(U5)/(S3/2)/(S3/2))

BETA .000
 ORBIT INC .500
 DELTA Z .140
 .000
 .500
 .140
 .000
 .500
 .280
 .000
 .500
 .280
 .000
 .500
 .280

REFERENCE INFORMATION

SREF 6.1980 SC. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0010



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$

DATA SET SYMBOLS: (C83020) (C83021) (C83022) (C83023) (C83024) (C83025)

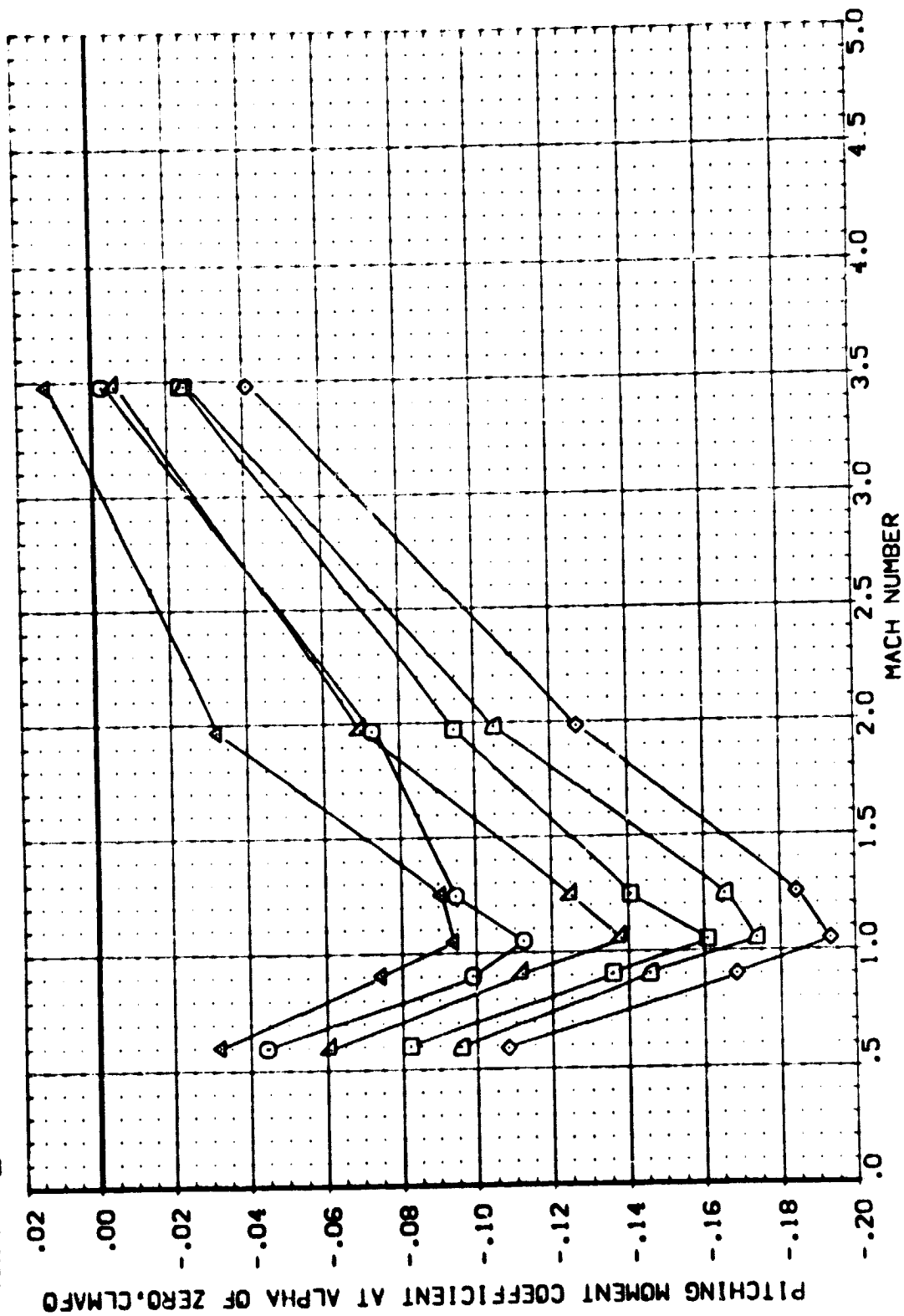
CONFIGURATION DESCRIPTION: MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2) MSFC 5701(A31F)(031)(T9)(U5)/(S3/2)/(S3/2)

BETA: .000 .000 .000 .000 .000 .000

ORBITING: .500 .500 .500 .500 .500 .500

DELTA Z: .140 .140 .140 .280 .280 .280

REFERENCE INFORMATION: SREF 6.1980 SQ. IN LREF 5.3130 LREF 5.3130 XREF 2.5490 YREF .0000 ZREF .0000 SCALE .0040

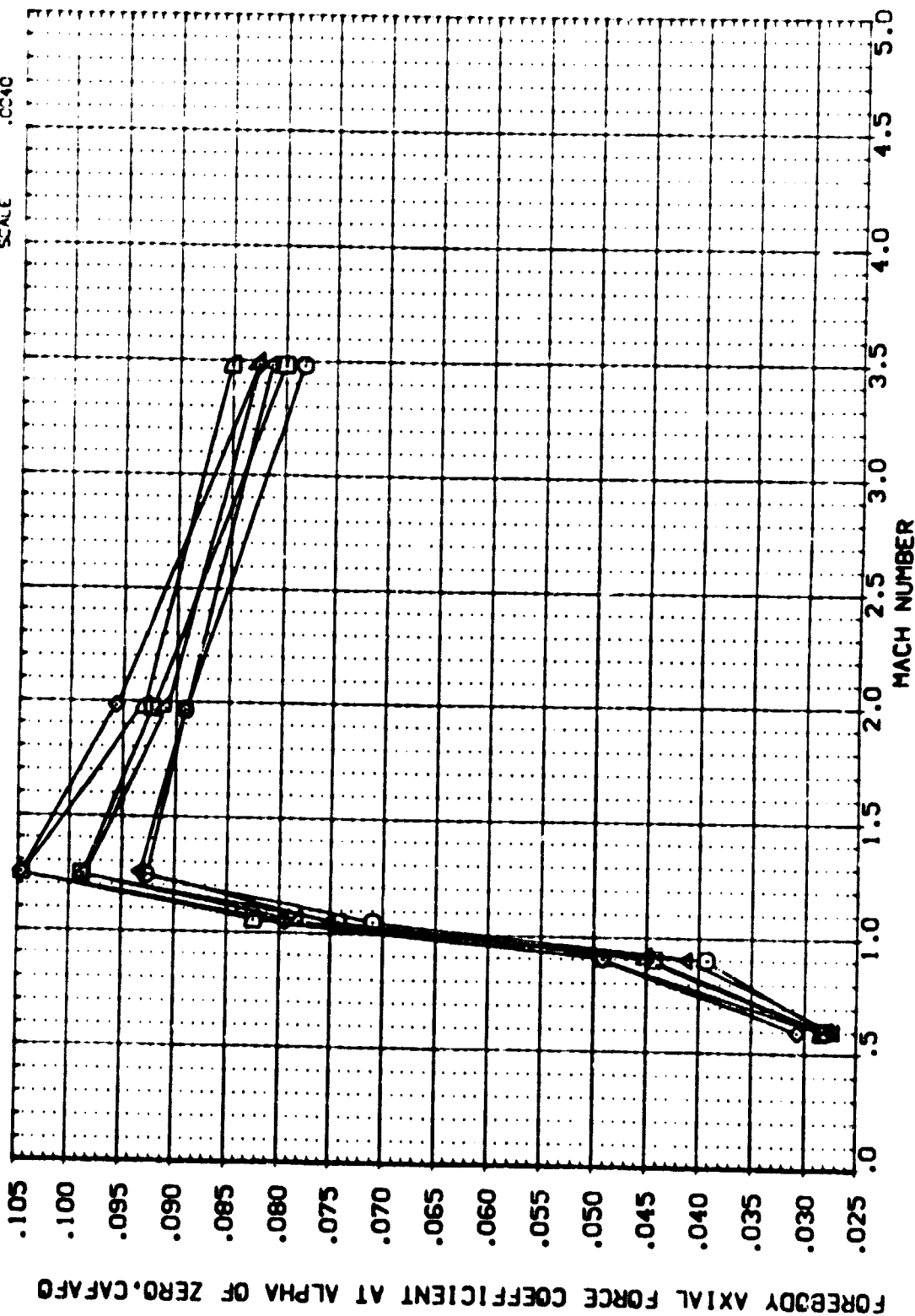


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF $(T9)(U5)/(S3/2)/(S3/2)$

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBITAL DELTA Z REFERENCE INFORMATION

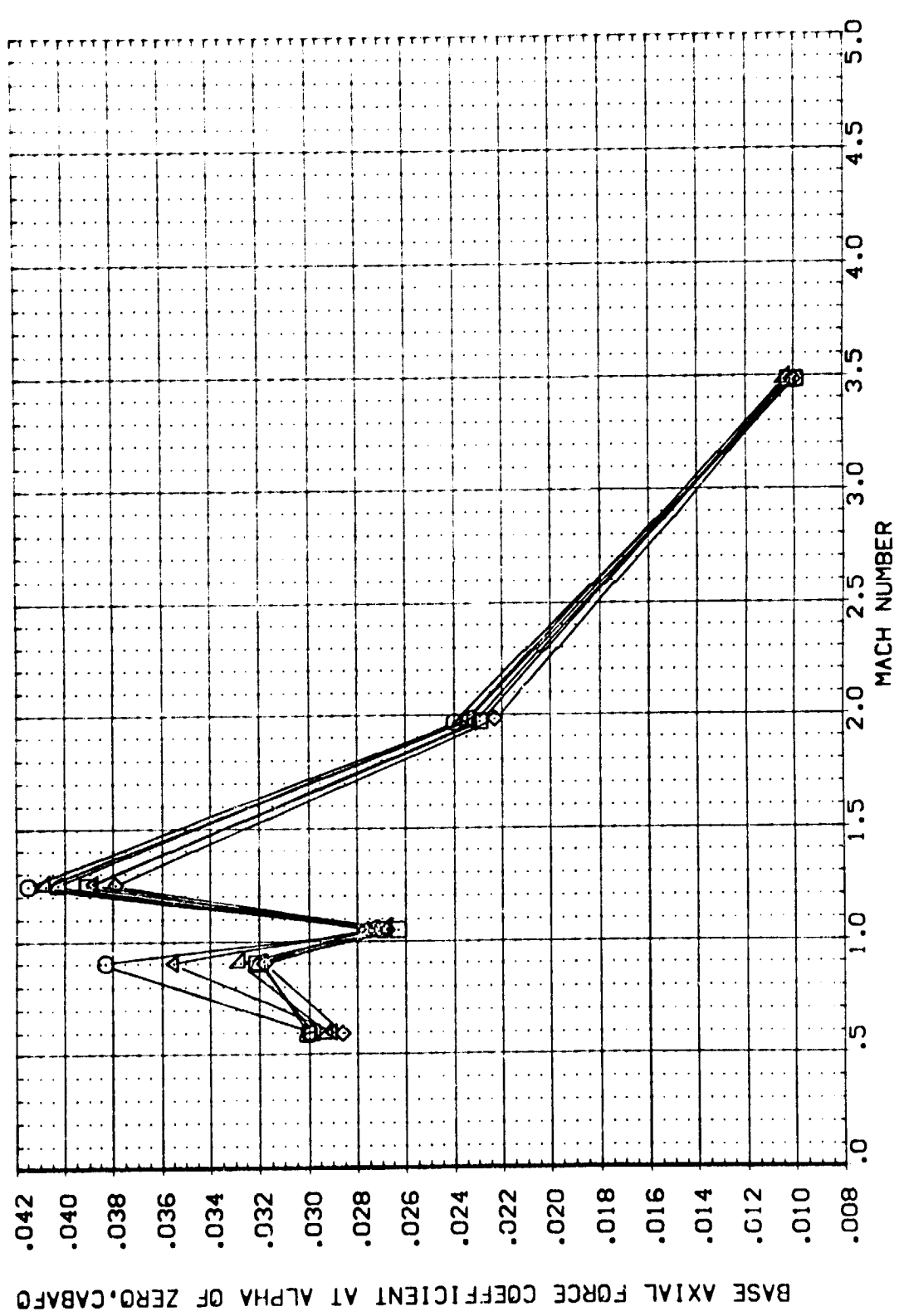
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83020)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83021)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.280	XREF 2.5480
(C83024)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.280	YREF .0000
(C83025)	M5 C 570 (A31F) (03) (19) (U5) / (S3/2) / (S3/2)	.000	.500	.280	ZREF .0000

SCALE .0040



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83020)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83021)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83022)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83023)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMR 2.5450
(C83024)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83025)	MSFC 570(I A31F)(031)/(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0340



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

(A83026)

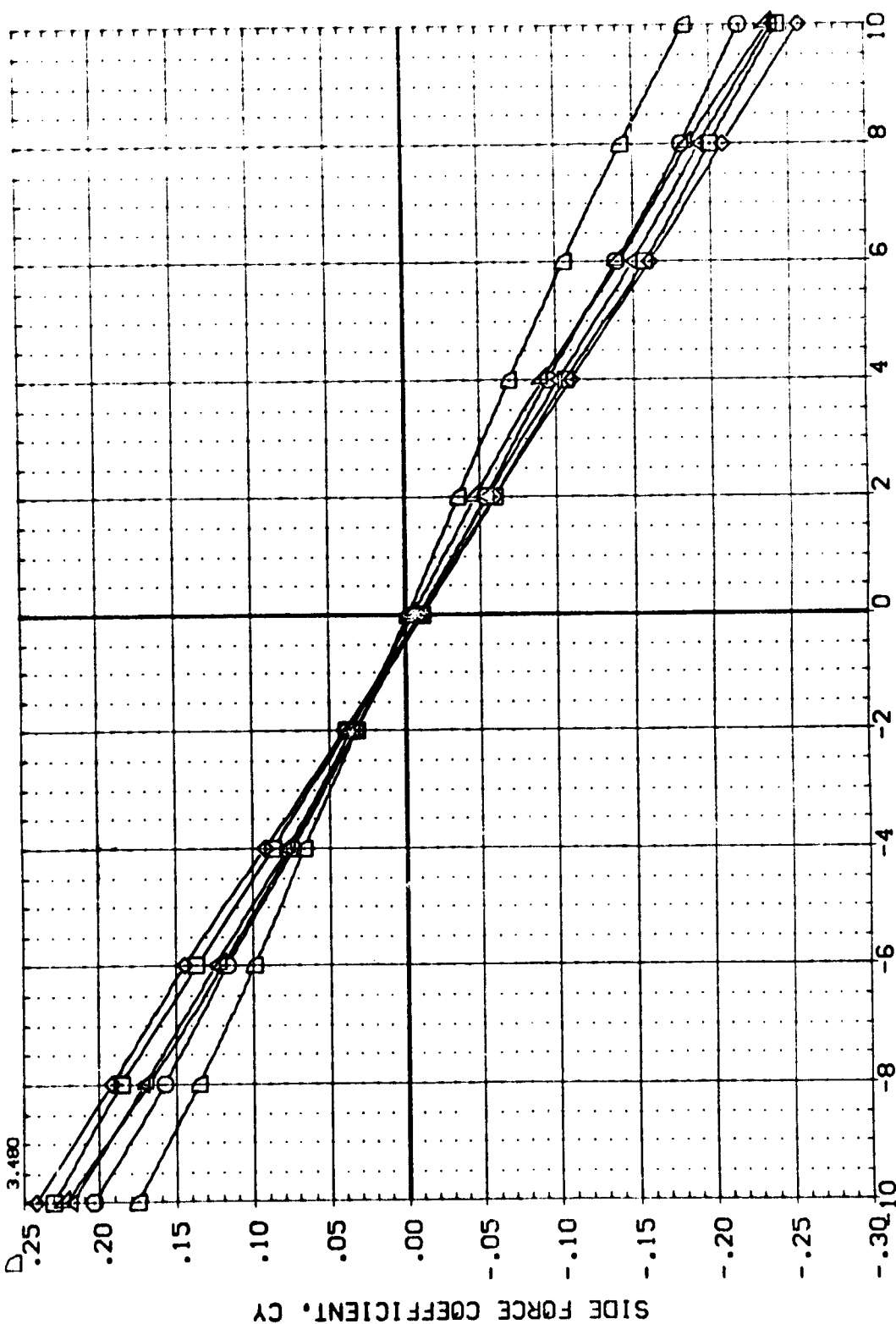
MSFC 570(1A31F)(03)/(T9)(U5)/(S3/2)/(S3/2)

REFERENCE INFORMATION
SREF 5.1980
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

PARAMETRIC VALUES
CONF IG 101.000
RUDDER .000
ORBIT INC .500
SPADIA .000

MACH ALPHA DELTA Z
.598 .000
1.001 .140
1.054 .000
1.251 .000
1.977 .000
3.480 .000

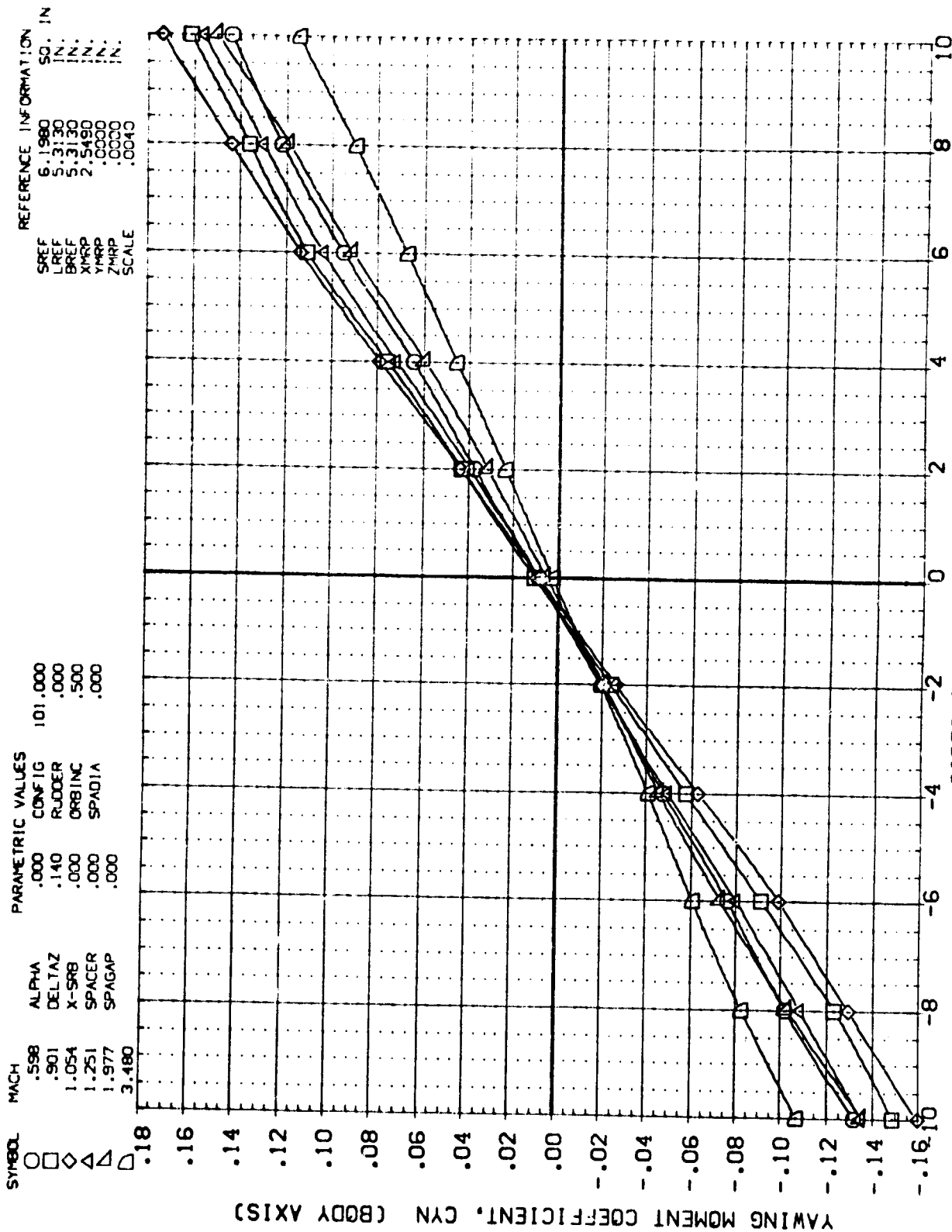
SYMBOL
□
◇
△
▽
○



SIDESLIP ANGLE, BETA, DEGREES

STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

MSFC 570(1A31F)(03)/(T9)(U5)/(S3/2)/(S3/2) (A83026)



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

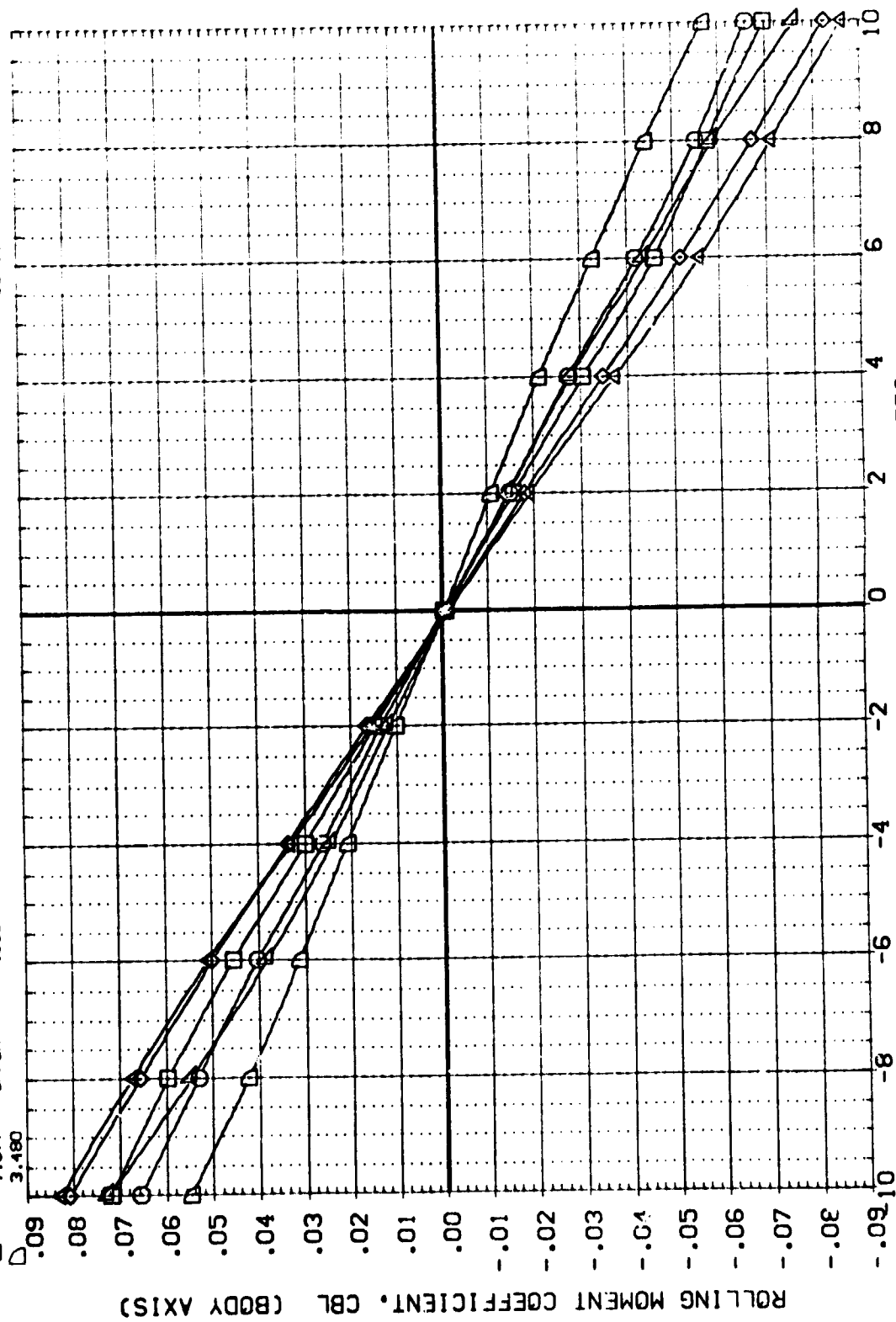
(A83026)

MSFC 570(1A31F)(03)/(T9)(U5)/(S3/2)

REFERENCE INFORMATION
SREF 6.1980
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

PARAMETRIC VALUES
ALPHA .000 CONFIG 101.000
DELTA Z .140 RUDDER .000
X-SRB .000 ORB INC .500
SPACER .000 SPADIA .000
SPAGAP .000

SYMBOL MACH
○ .598
□ .901
◇ 1.054
△ 1.251
▽ 1.977

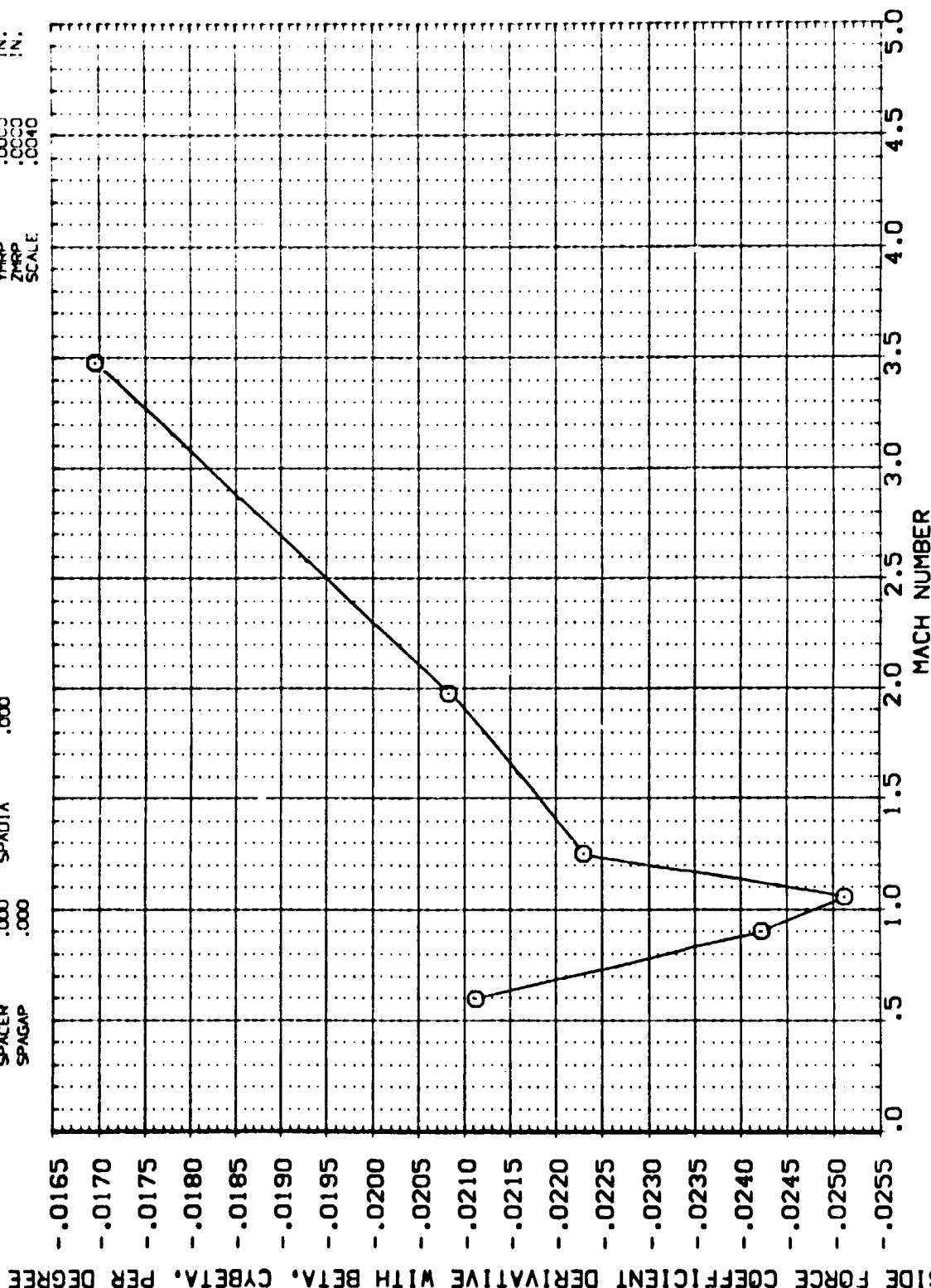


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)

MSFC 570(1A31F)(03)/(T9)(U5)/(S3/2)/(S3/2) (A83026)

REFERENCE INFORMATION
 SREF 6.1980 SO. IN
 LREF 5.313C
 GREF 5.313C
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000 CONFIG 101.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBINC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

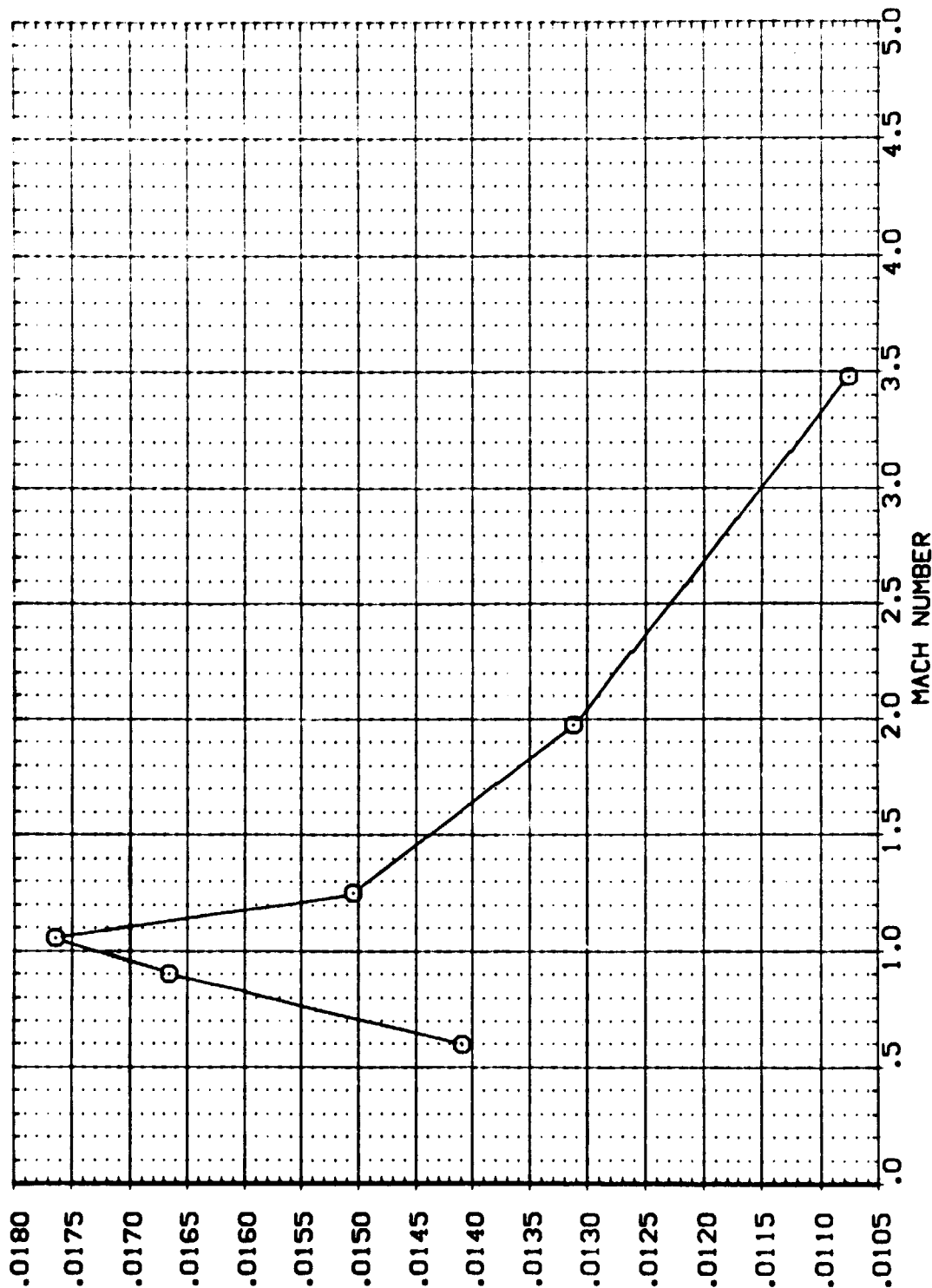


STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000 CONFIG 101.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBINC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

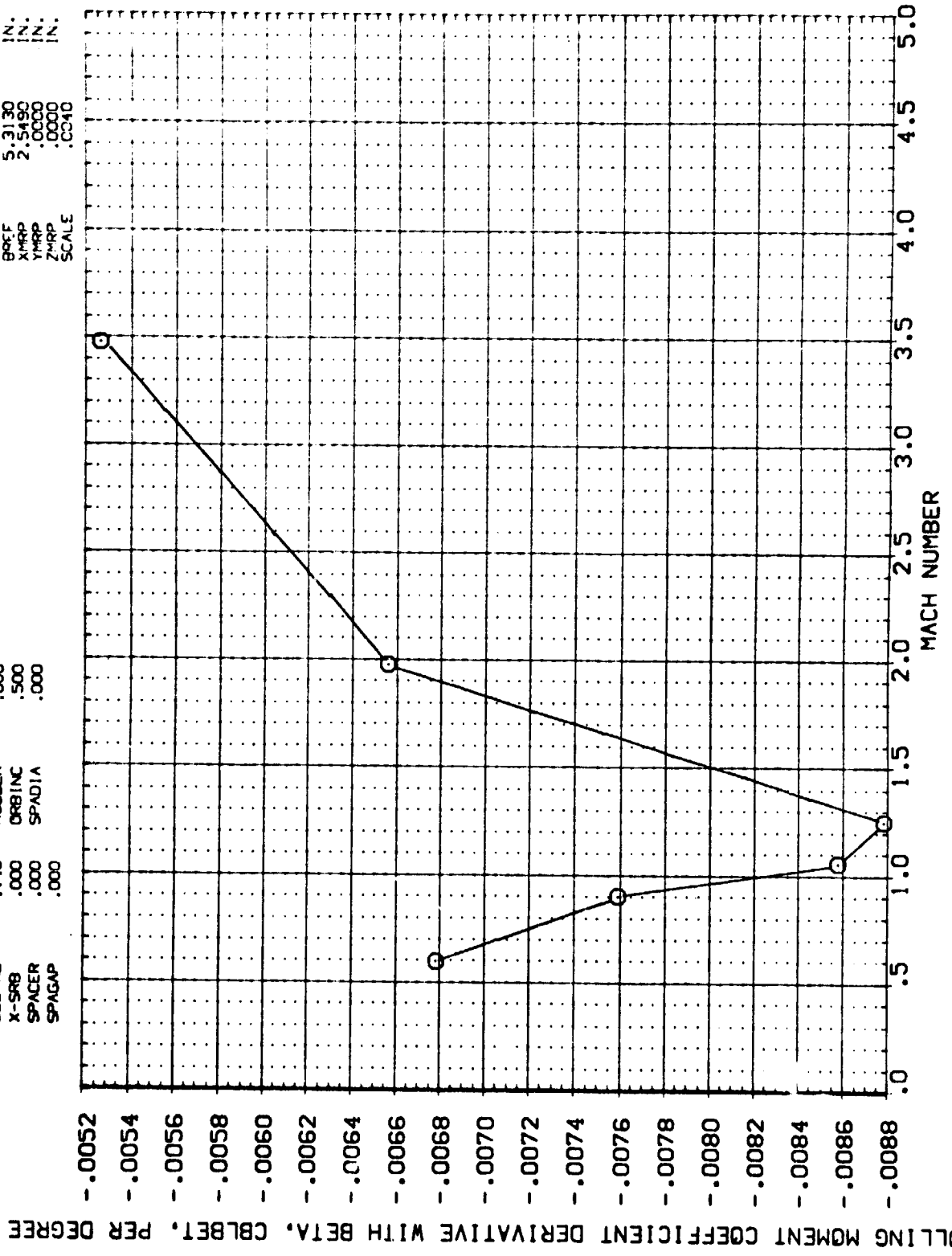
MSFC 570(1A31F)(03)/(T9)(U5)/(S3/2)/(S3/2) (A83026)

PARAMETRIC VALUES

ALPHA	.000	CONF IG	101.000
DELTA Z	.140	RUDDER	.000
X-SRB	.000	ORBITIC	.500
SPACER	.000	SPADIA	.000
SPAGAP	.000		

REFERENCE INFORMATION

SREF	6.1980	SO. IN
LREF	5.3130	IN
BOFF	5.3130	IN
XMRP	2.5490	IN
YMRP	.0000	IN
ZMRP	.0000	IN
SCALE	.0010	



STABILITY CHARACTERISTICS - ORBITER IN PRESENCE OF (T9)(U5)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

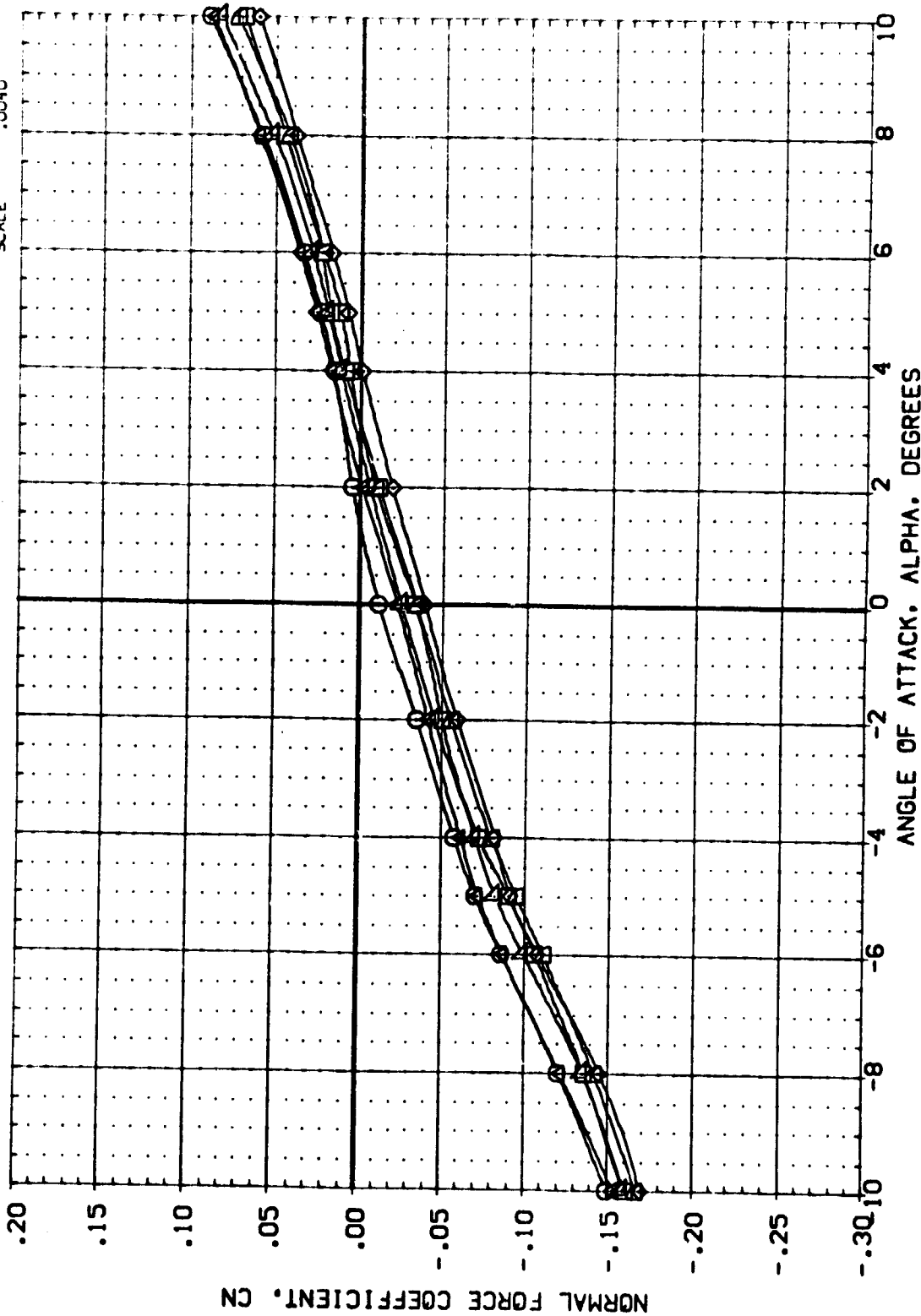
(C83T01)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T02)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T03)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T04)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T05)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T06)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION IN

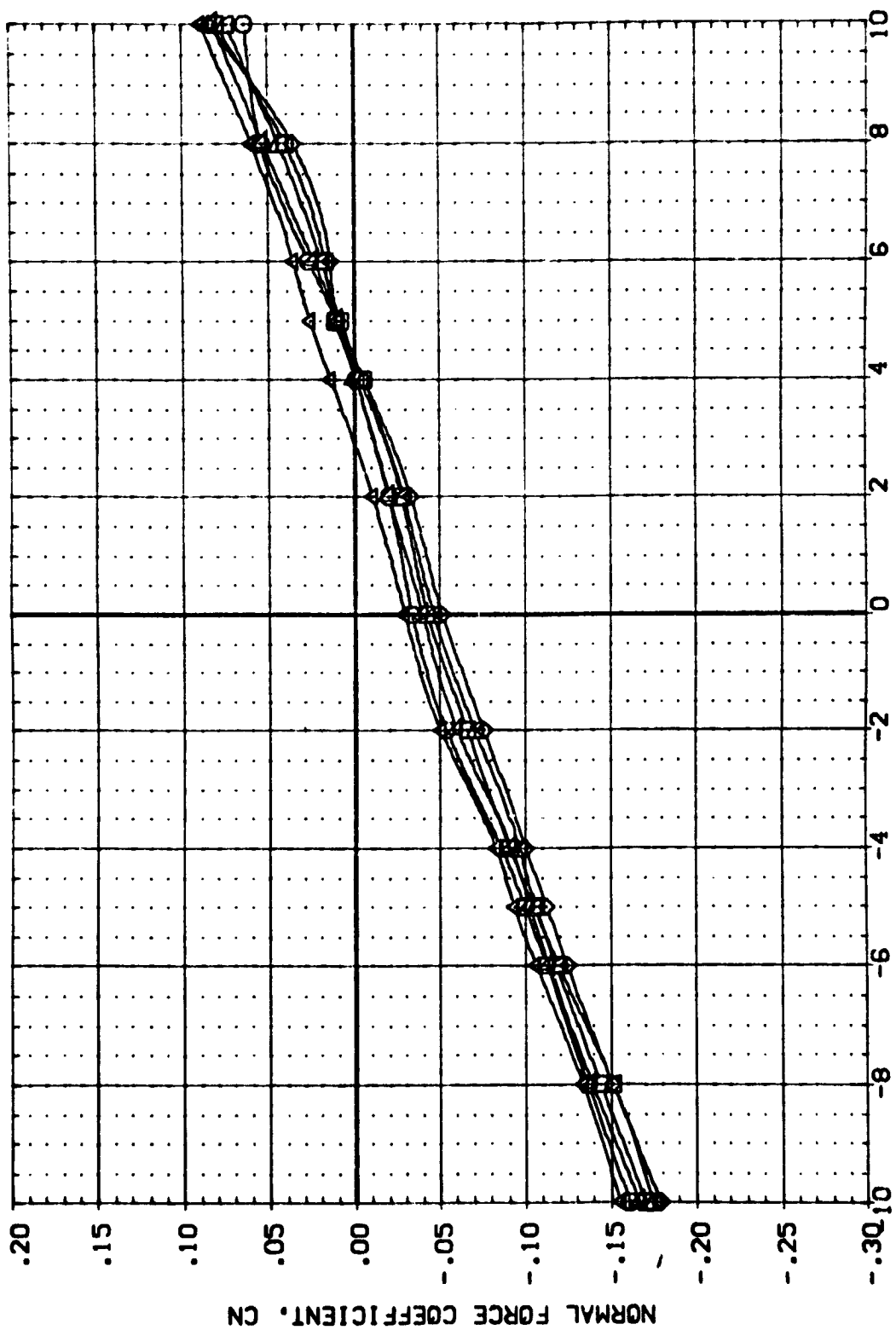
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LREF	5.3130	N.	N.
BREF	5.3130	N.	N.
XMRP	2.5480	N.	N.
YMRP	.0000	N.	N.
ZMRP	.0000	N.	N.
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .60

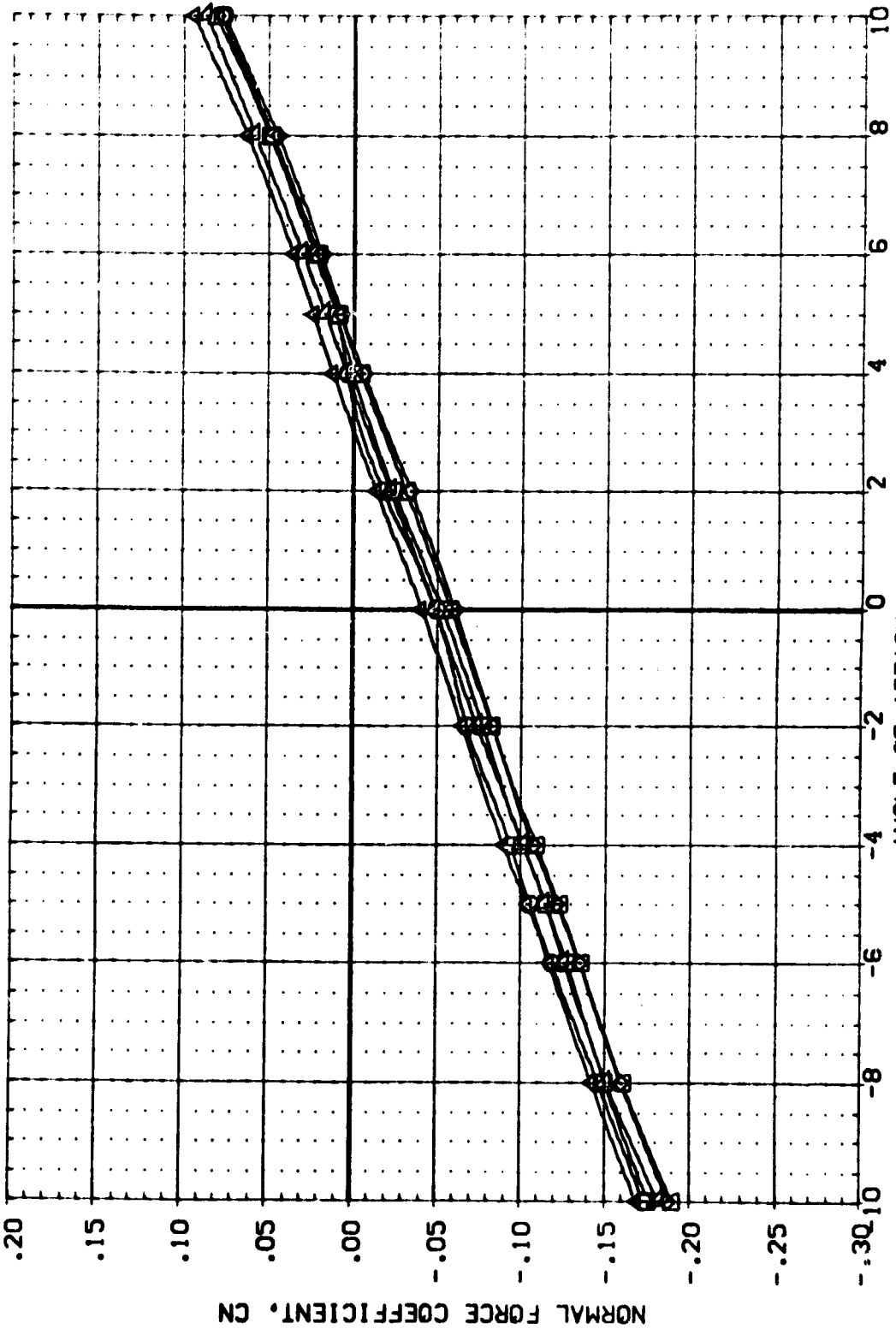
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL INC	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.140	SREF 6.1980 SQ. IN
(C83102)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83103)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83104)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.280	XMRP 2.5490 IN.
(C83105)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.280	YMRP .0000 IN.
(C83106)	MSFC 570((A31F))(T9)((03))/((S3/2))/((S3/2))	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/((S3/2))/((S3/2))

(B)MACH = .80

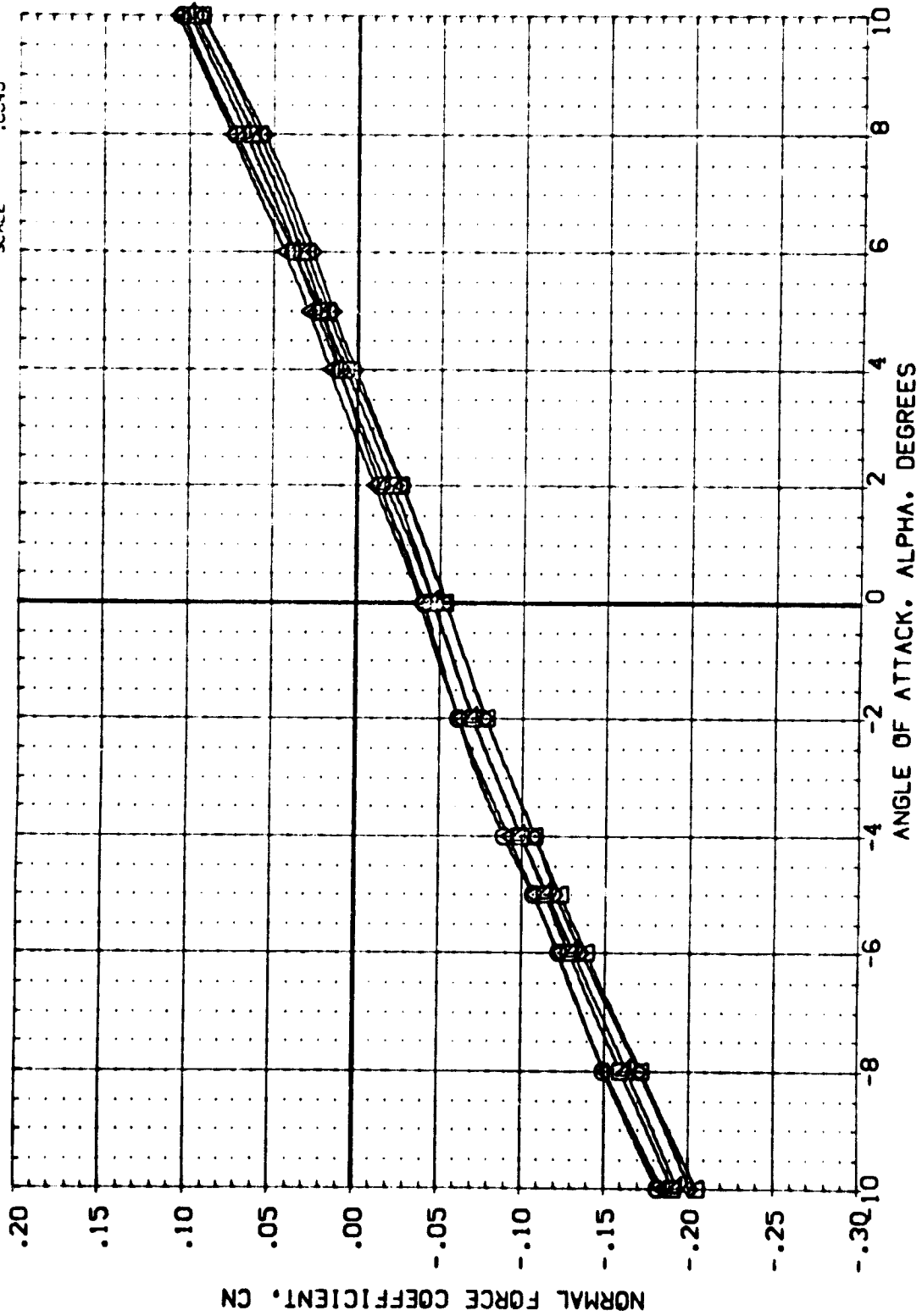
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	-.500	.140	SREF 6.1960 SQ. IN
(C83T02)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	.500	.140	LREF 5.3130 IN.
(C83T03)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	1.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	-.500	.280	YMRP 2.5490 IN.
(C83T05)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	.500	.280	ZMRP .0000 IN.
(C83T06)	MSFC 570([A31F])(T9)/([03])(S3/2)/([S3/2])	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(CB3T01)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SO. IN
(CB3T02)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(CB3T03)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(CB3T04)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(CB3T05)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	CMRP .0000 IN.
(CB3T06)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0340



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(03)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83T01) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(C83T02) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(C83T03) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(C83T04) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(C83T05) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(C83T06) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

BETA ORIGIN DELTA Z

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980 SC. IN

LREF 5.3130 IN

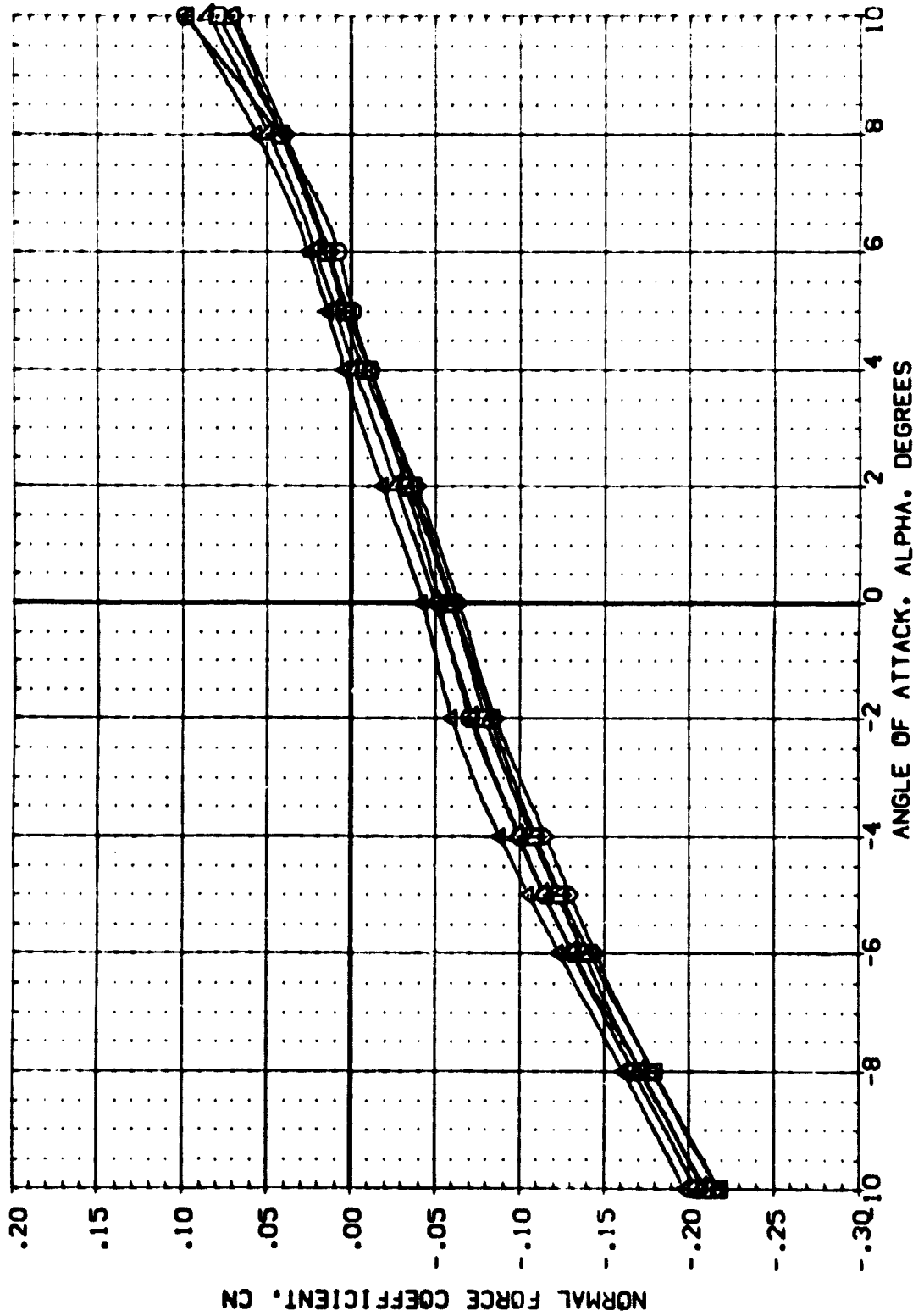
BREF 5.3130 IN

XMRP 2.5490 IN

YMRP .0000 IN

ZMRP .0000 IN

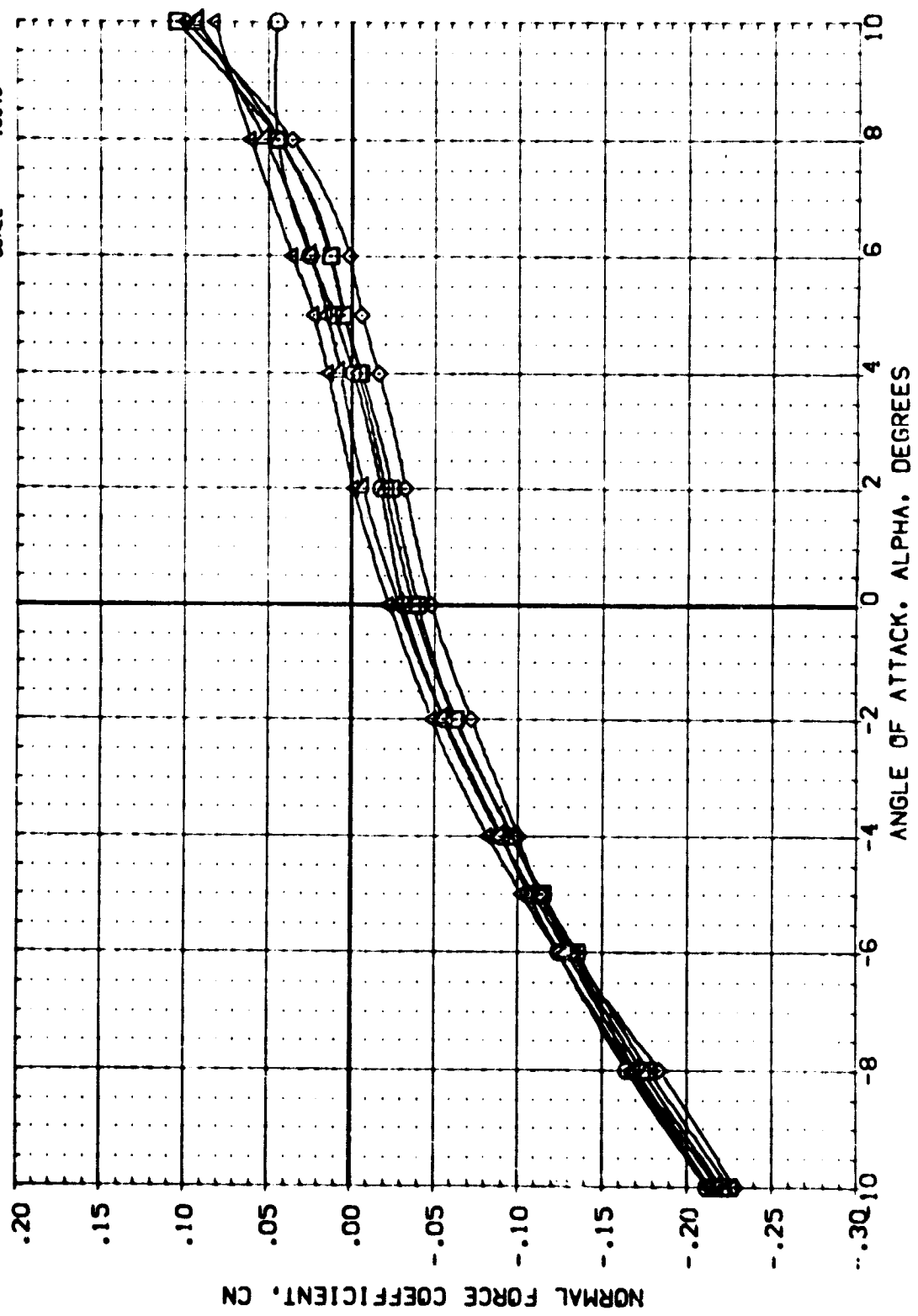
SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.25

DATA SET SYMBO	CONFIGURATION DESCRIPTION	BETA	ORIGIN	DELTA Z	REFERENCE INFORMATION
CB3T01	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
CB3T02	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
CB3T03	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
CB3T04	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.260	XMRP 2.5450
CB3T05	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.260	YMRP .0000
CB3T06	MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.260	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

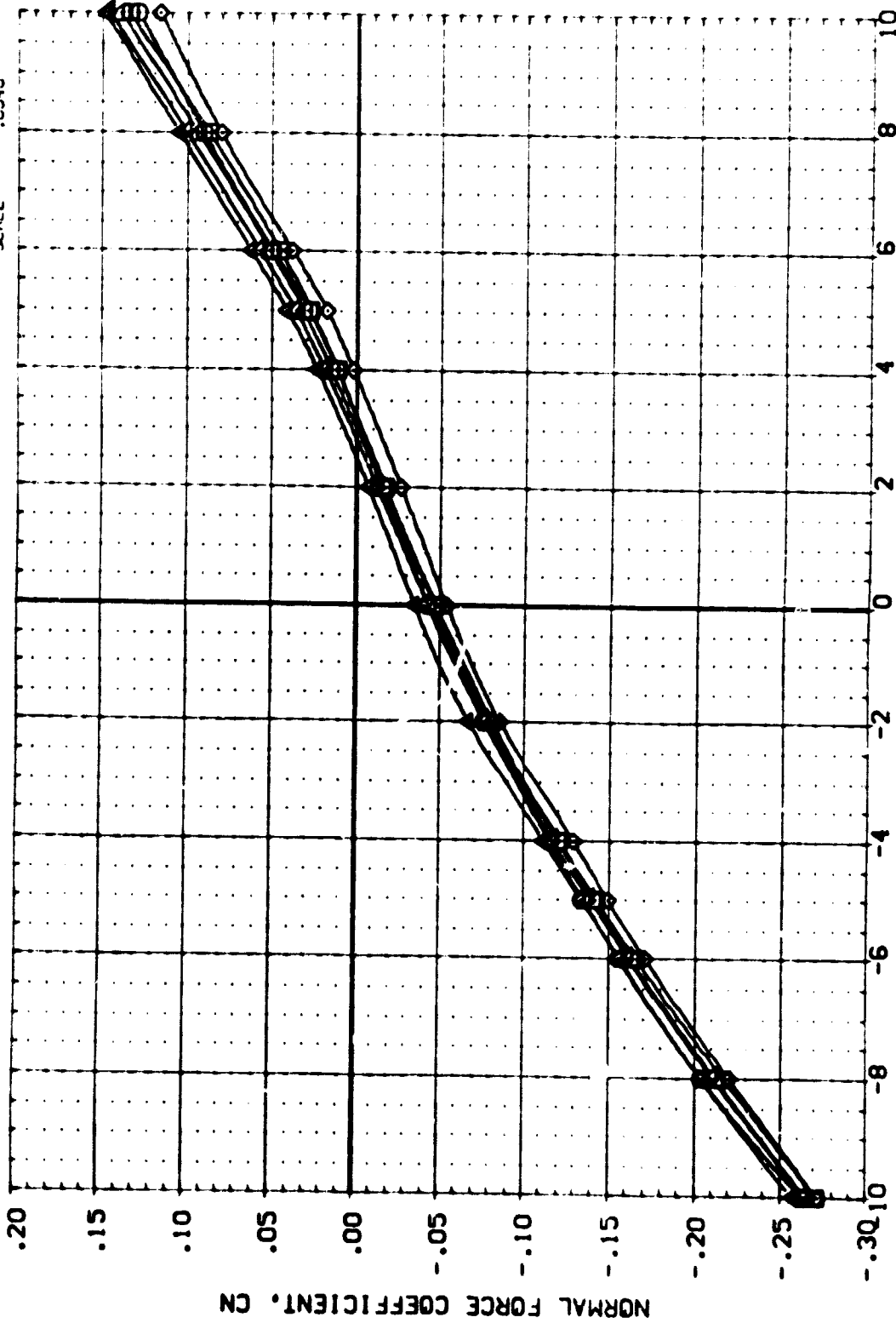
(C83T01)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T02)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T03)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T04)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T05)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
(C83T06)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)

BETA ORBITAL DELTAZ

.000	-.500	.140
.000	-.500	.140
.000	-.500	.140
.000	-.500	.280
.000	-.500	.280
.000	-.500	.280

REFERENCE INFORMATION

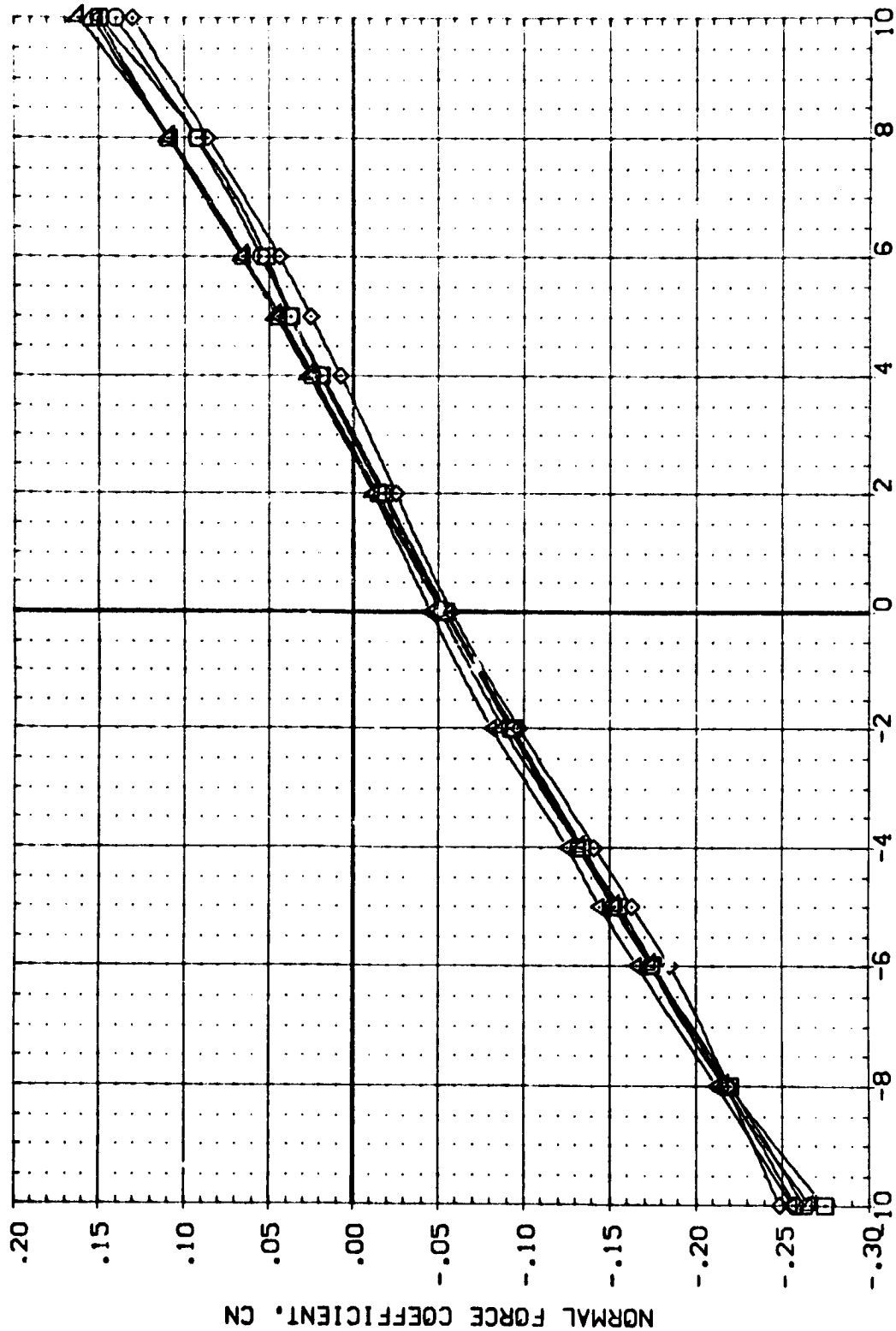
SREF	6.1980	SC	IN
LREF	5.3130		
BREF	5.3130		
XMRP	2.5450		
YMRP	.0000		
ZMRP	.0000		
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(G)MACH = 1.96

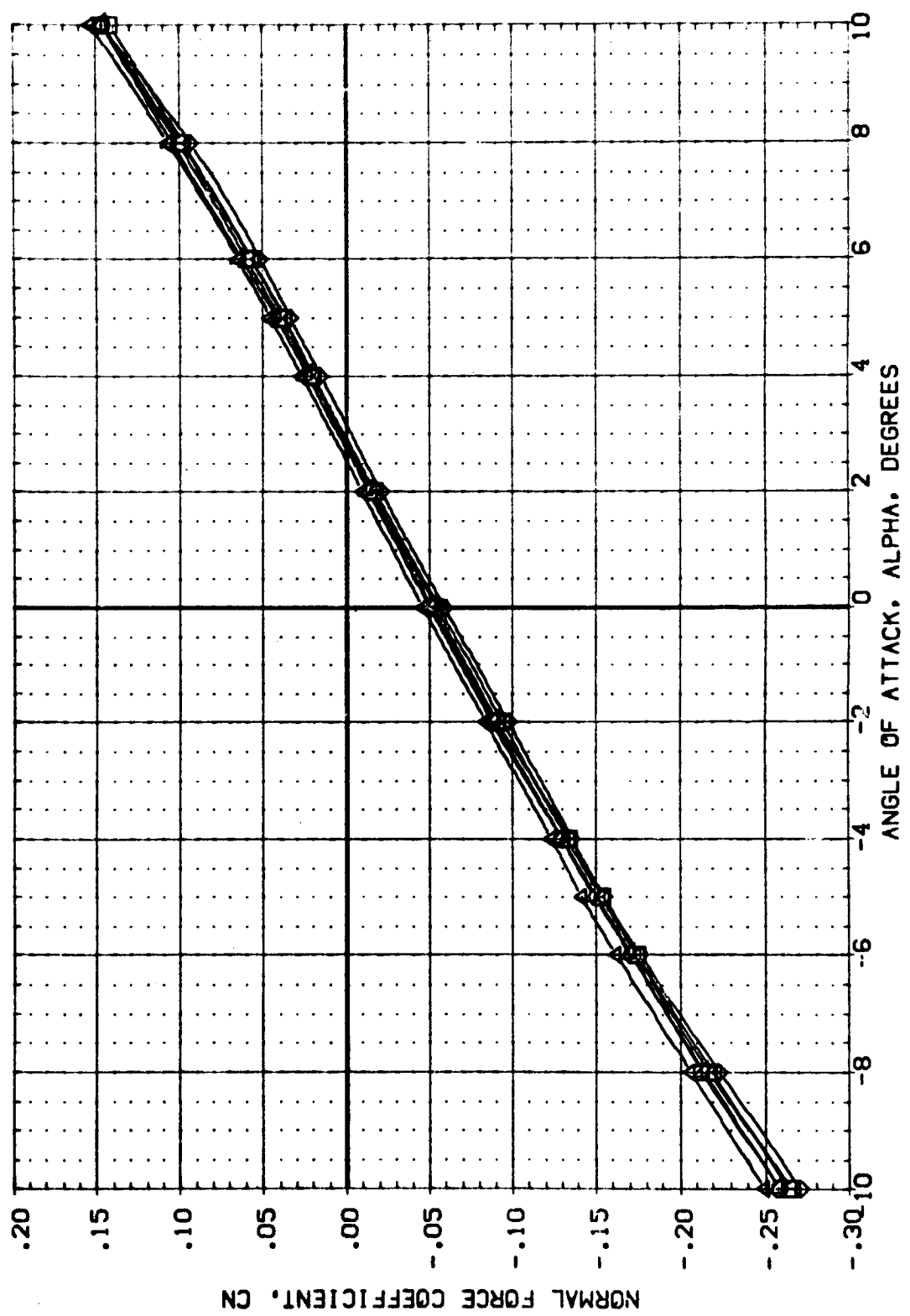
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CL A	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1960 SQ. IN
(C83T02)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3132 IN.
(C83T03)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.545C IN.
(C83T05)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83T06)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(M)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	C98INC	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 IN.
(C83T02)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83T03)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 IN.
(C83T05)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.280	ZMRP .0000 IN.
(C83T06)	MSFC 570(I A3 I F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040

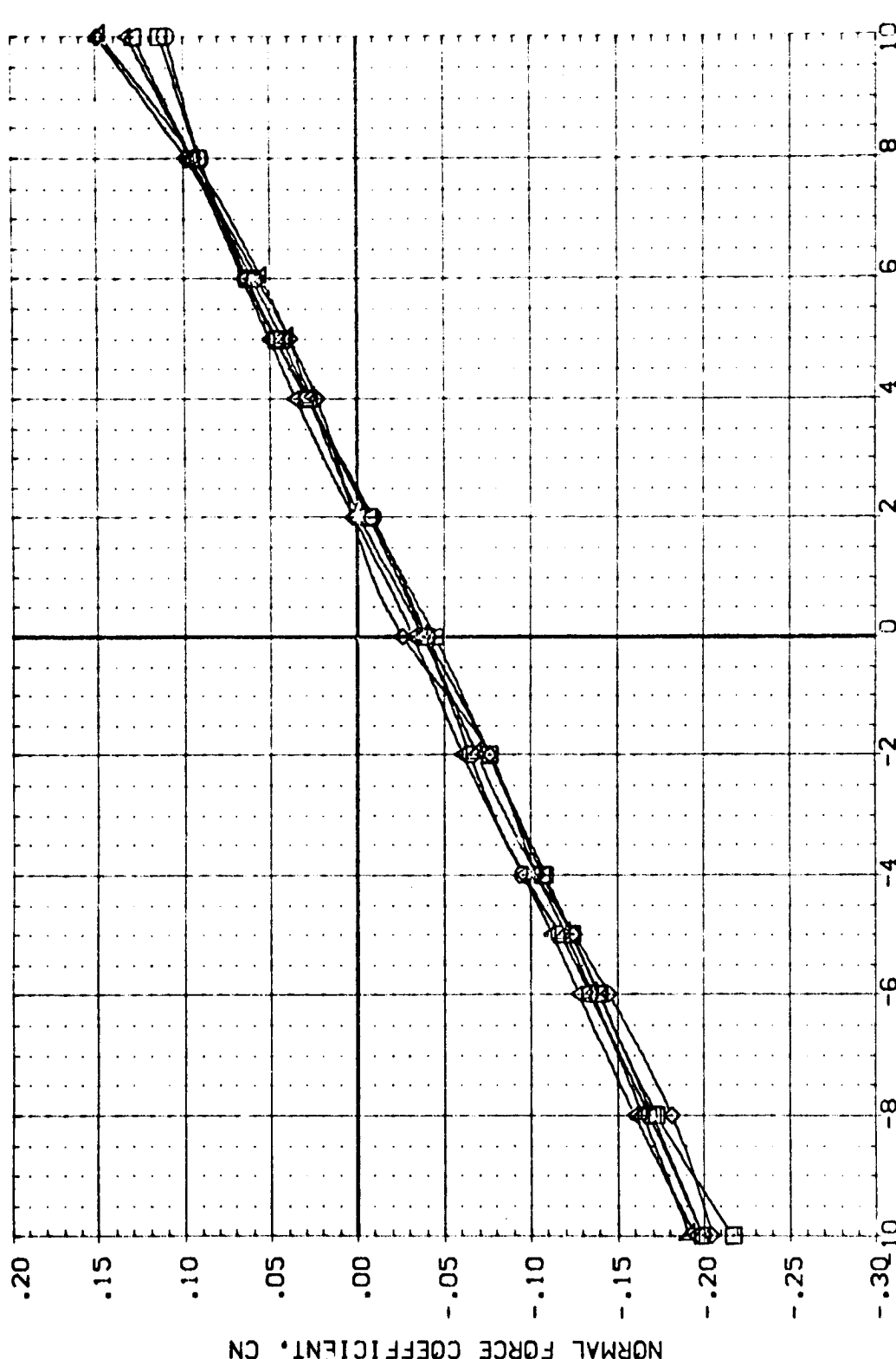


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(M)MACH = 3.48



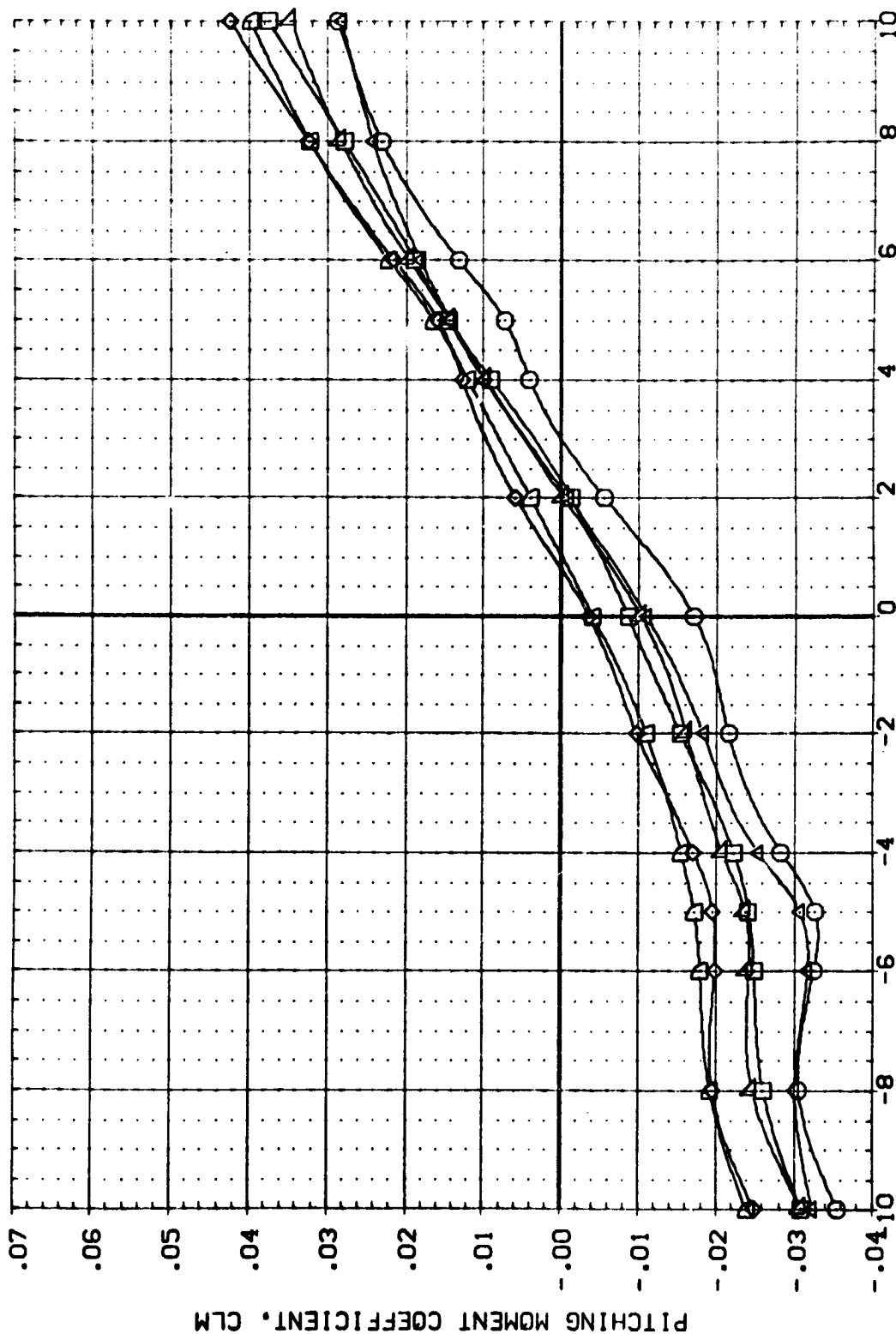
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1900 SQ. IN
(C83T02)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5450
(C83T05)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					COC .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

COMACH = 4.96

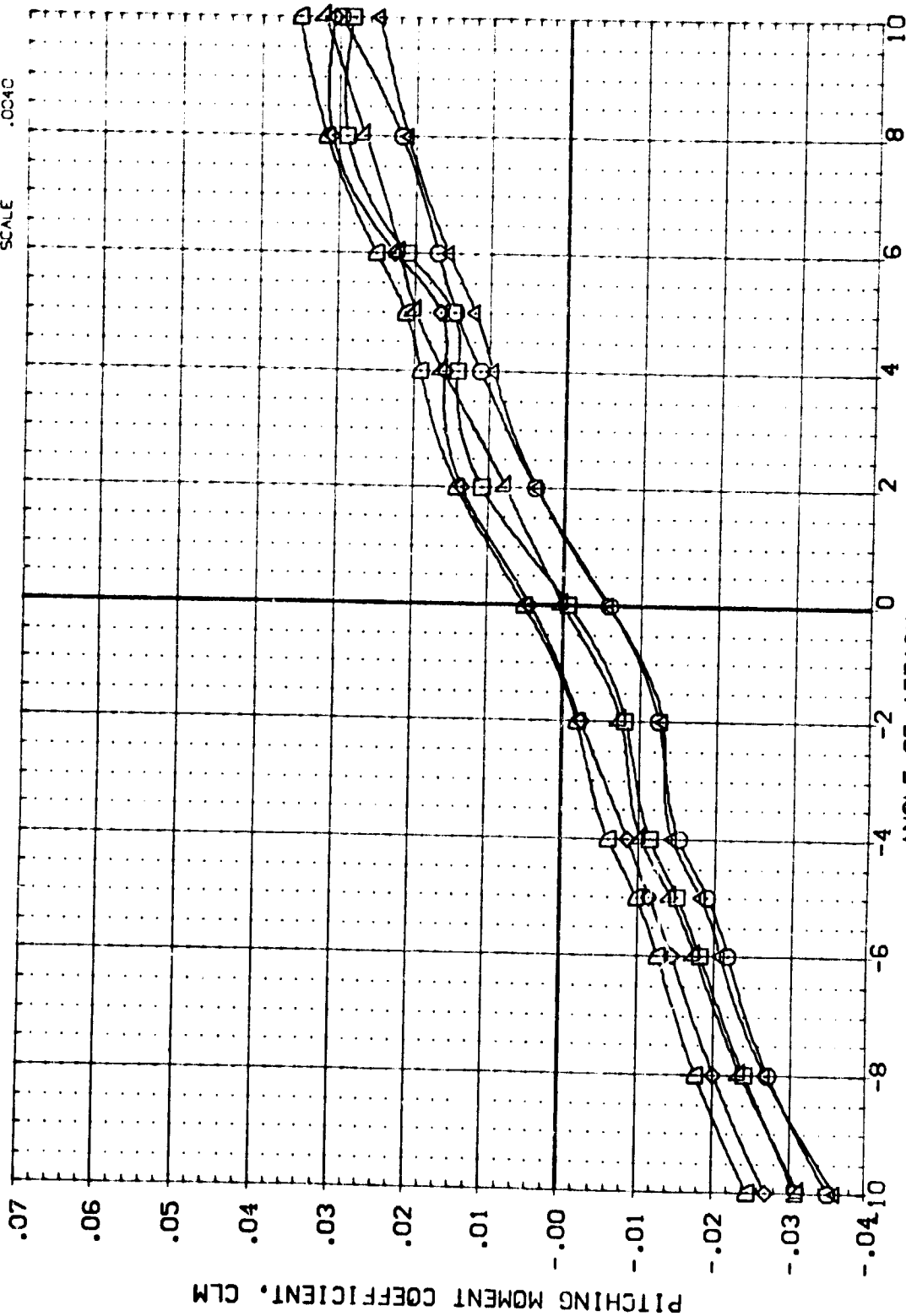
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83T02)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.140	BREF 2.5490
(C83T04)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.280	YMRP .0000
(C83T05)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.280	ZMRP .0000
(C83T06)	MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03) / (S3/2) / (S3/2)

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1980
(C83T02)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP 2.5490
(C83T05)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(B)MACH = .80

DATA SET SYMBOL CONFIGURATION DESCRIPTION

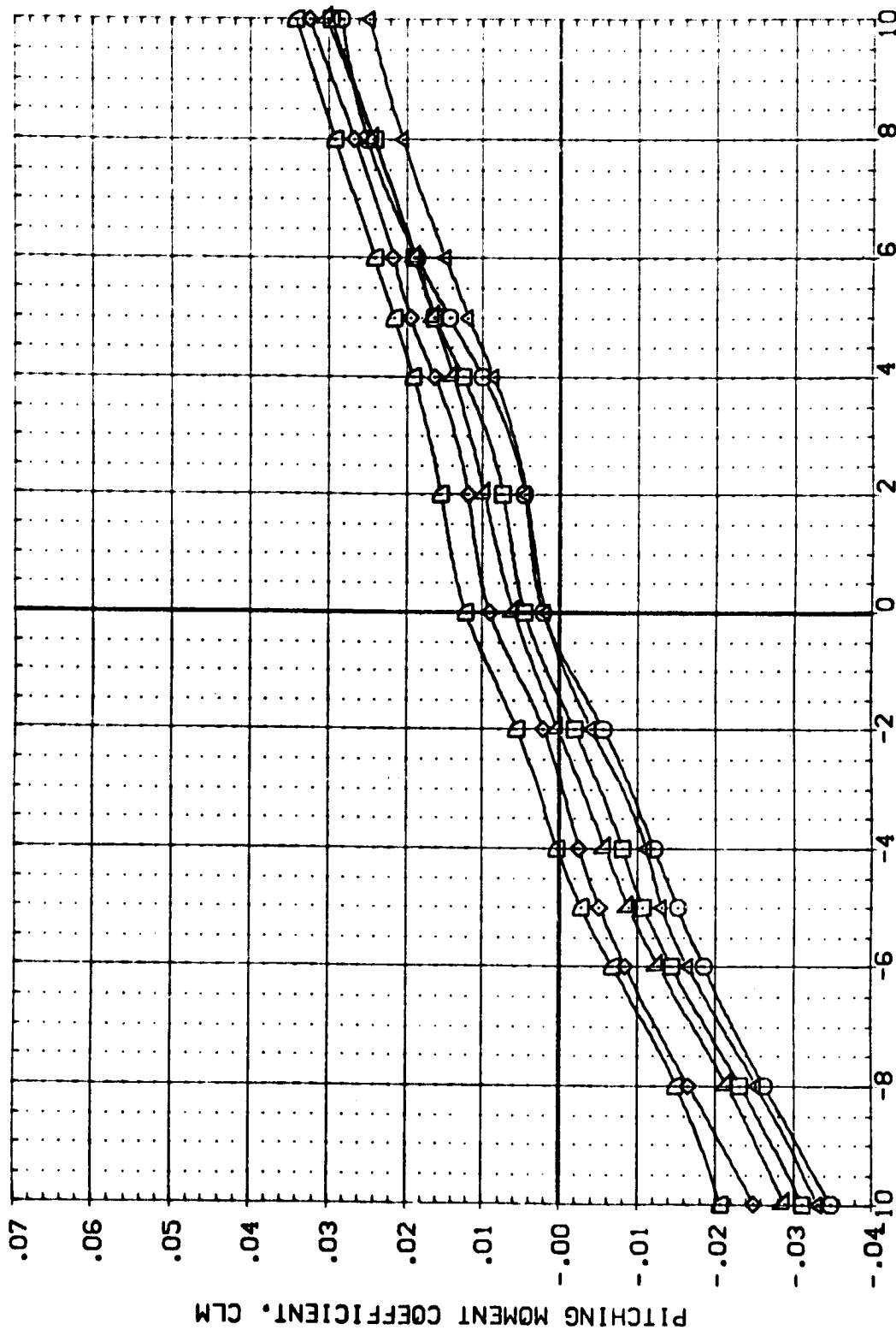
(C83T01)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))
(C83T02)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))
(C83T03)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))
(C83T04)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))
(C83T05)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))
(C83T06)	MSFC 570((A31F))((T9))((03))((S3/2))((S3/2))

BETA ORBINC DELTAZ

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

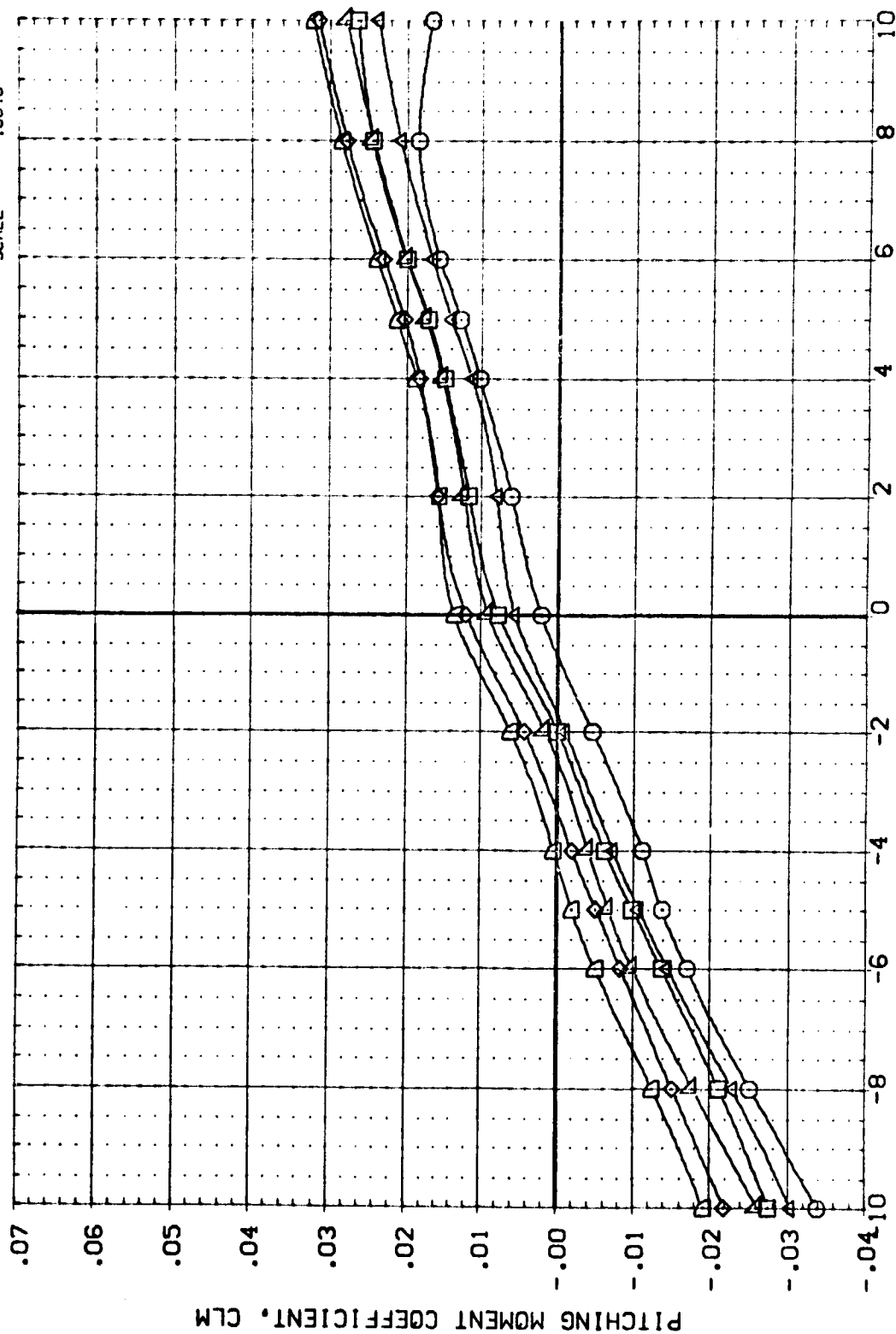
SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5490	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/((S3/2))/((S3/2))

(C)MACH = .90

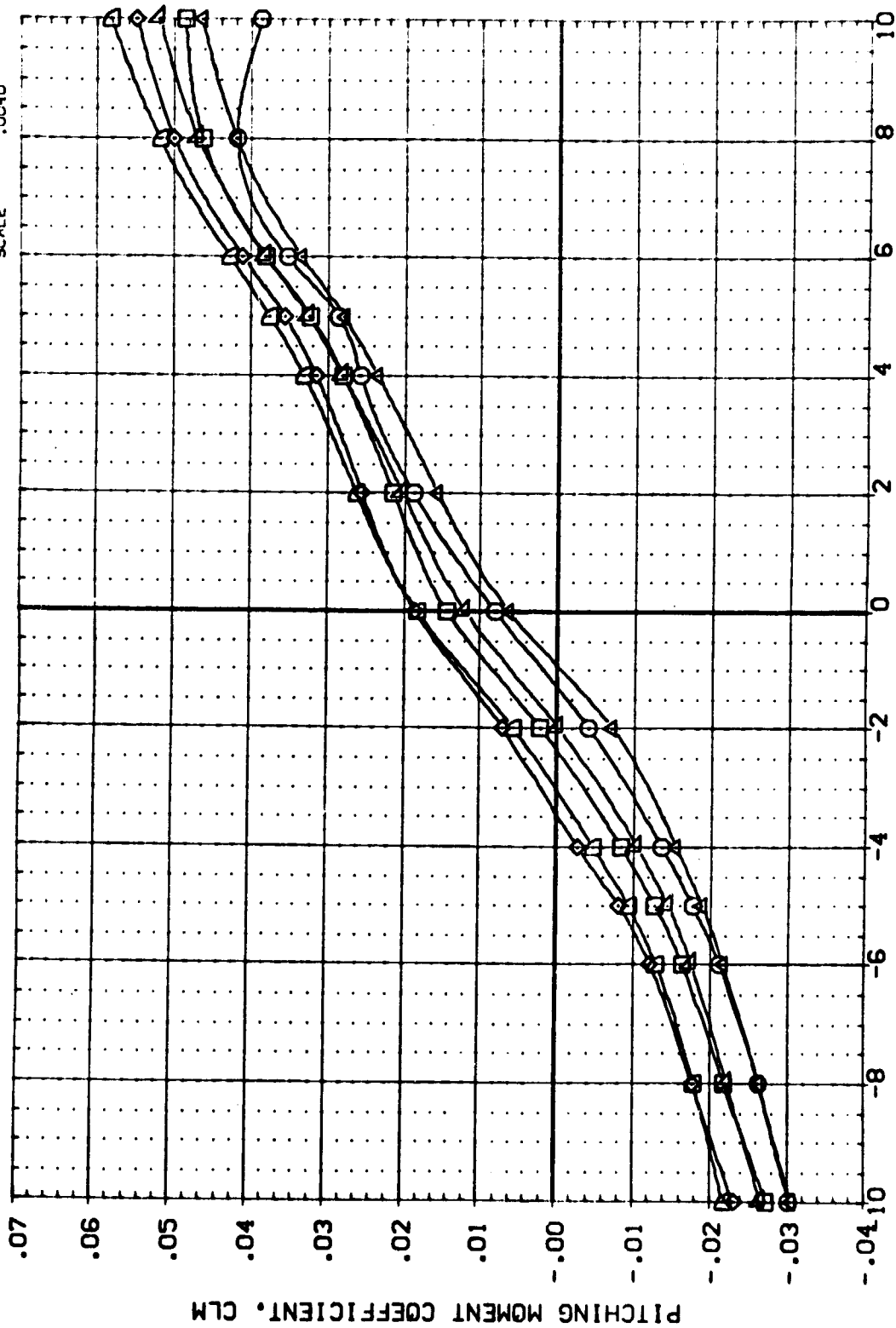
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83102)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.140	LREF 5.3130 N.
(C83103)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.140	BREF 5.3130 N.
(C83104)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.280	XMRP 2.5490 N.
(C83105)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.280	YMRP .0000 N.
(C83106)	MSFC 570(I A31F)(T9)/(03)/(S3/2)	.000	.500	.280	ZMRP .0000 N.
					SCALE .0040



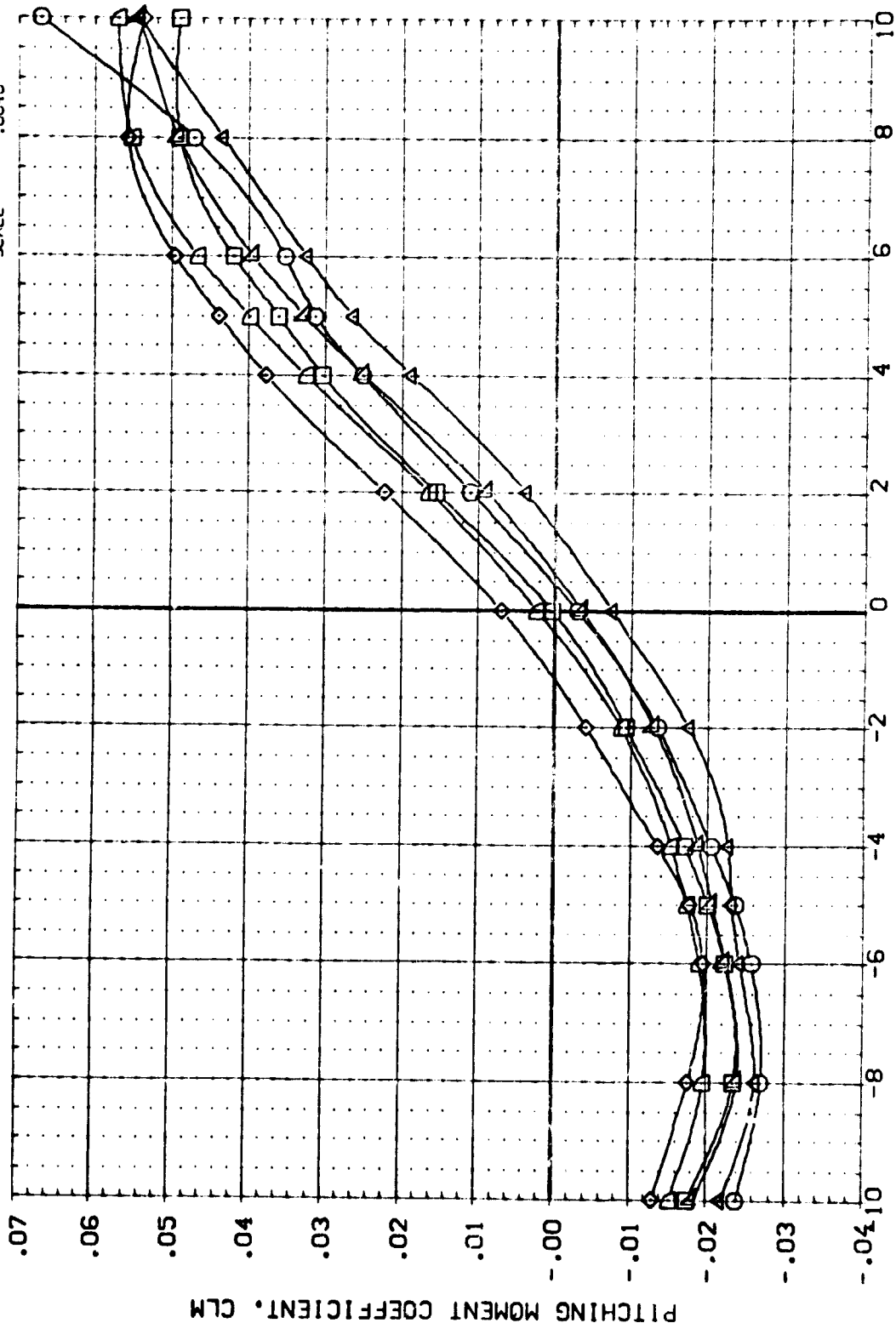
STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83102)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83103)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83104)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83105)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83106)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 IN
(C83T02)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83T03)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83T04)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5190 IN
(C83T05)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83T06)	MSFC 570(I A3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN
					SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(F)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

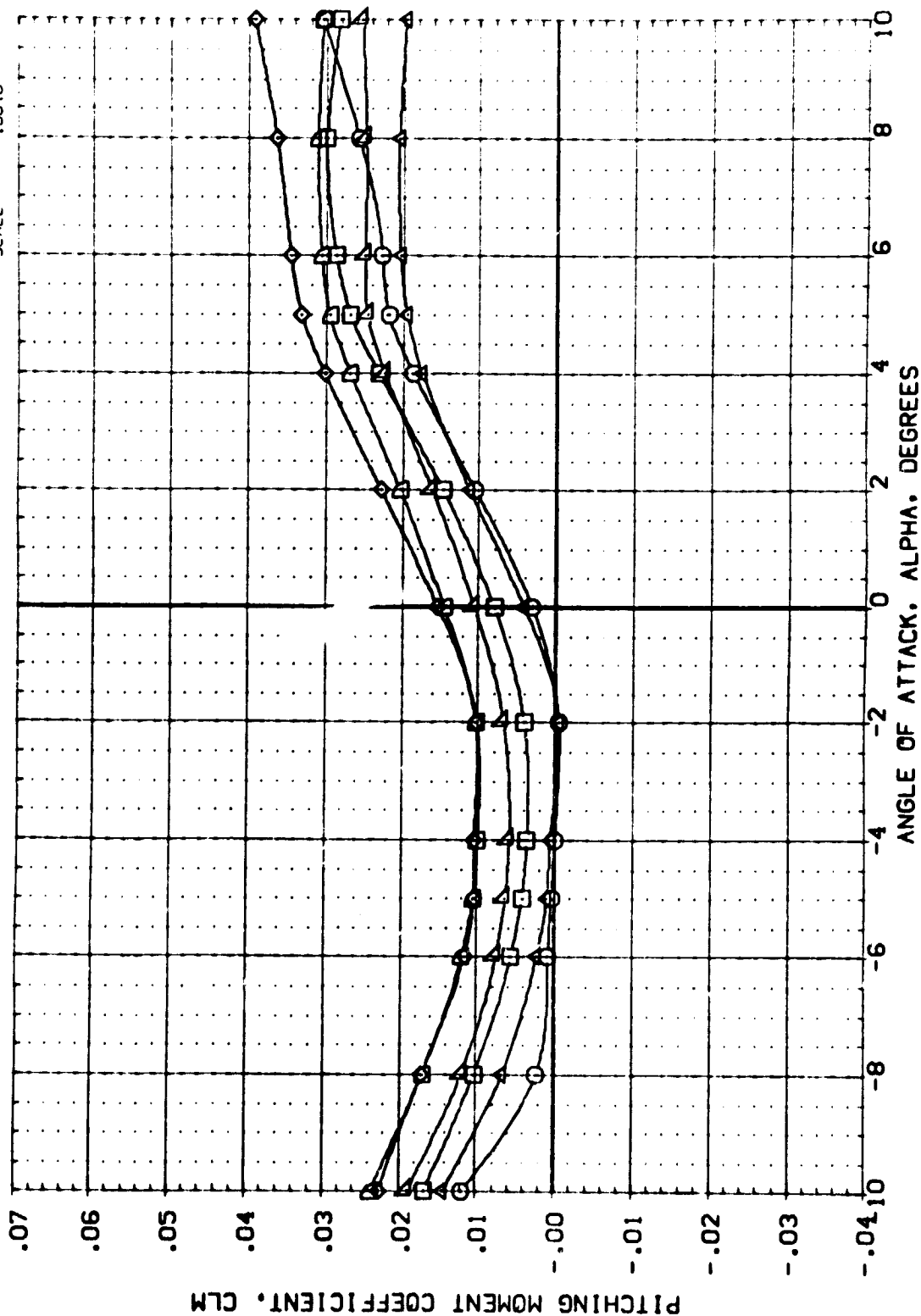
(C83T01)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)
(C83T02)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)
(C83T03)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)
(C83T04)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)
(C83T05)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)
(C83T06)	MSFC 570((A31F)(T9))/(O3)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

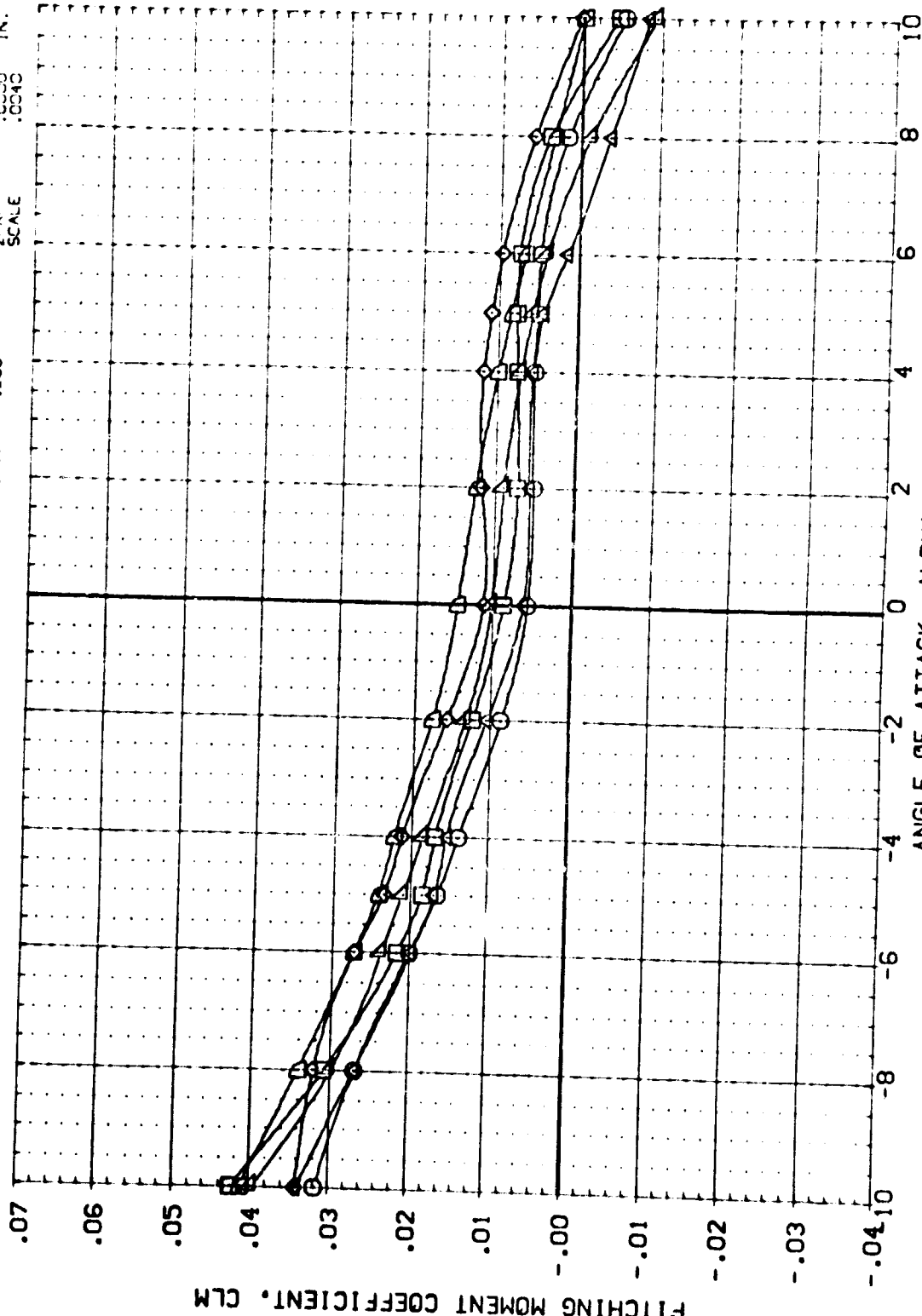
SREF	6.1980	SO	1.0
LREF	5.3130	SO	1.0
BREF	5.3130	SO	1.0
XMRP	2.5490	SO	1.0
YMRP	.0000	SO	1.0
ZMRP	.0000	SO	1.0
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(G)MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83T02)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83T04)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRD 2.5450
(C83T05)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRD .0000
(C83T06)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (S3/2)/(S3/2)

(M)MACH = 2.99

DATA SET SYMBOL CONFIGURATION DESCRIPTION

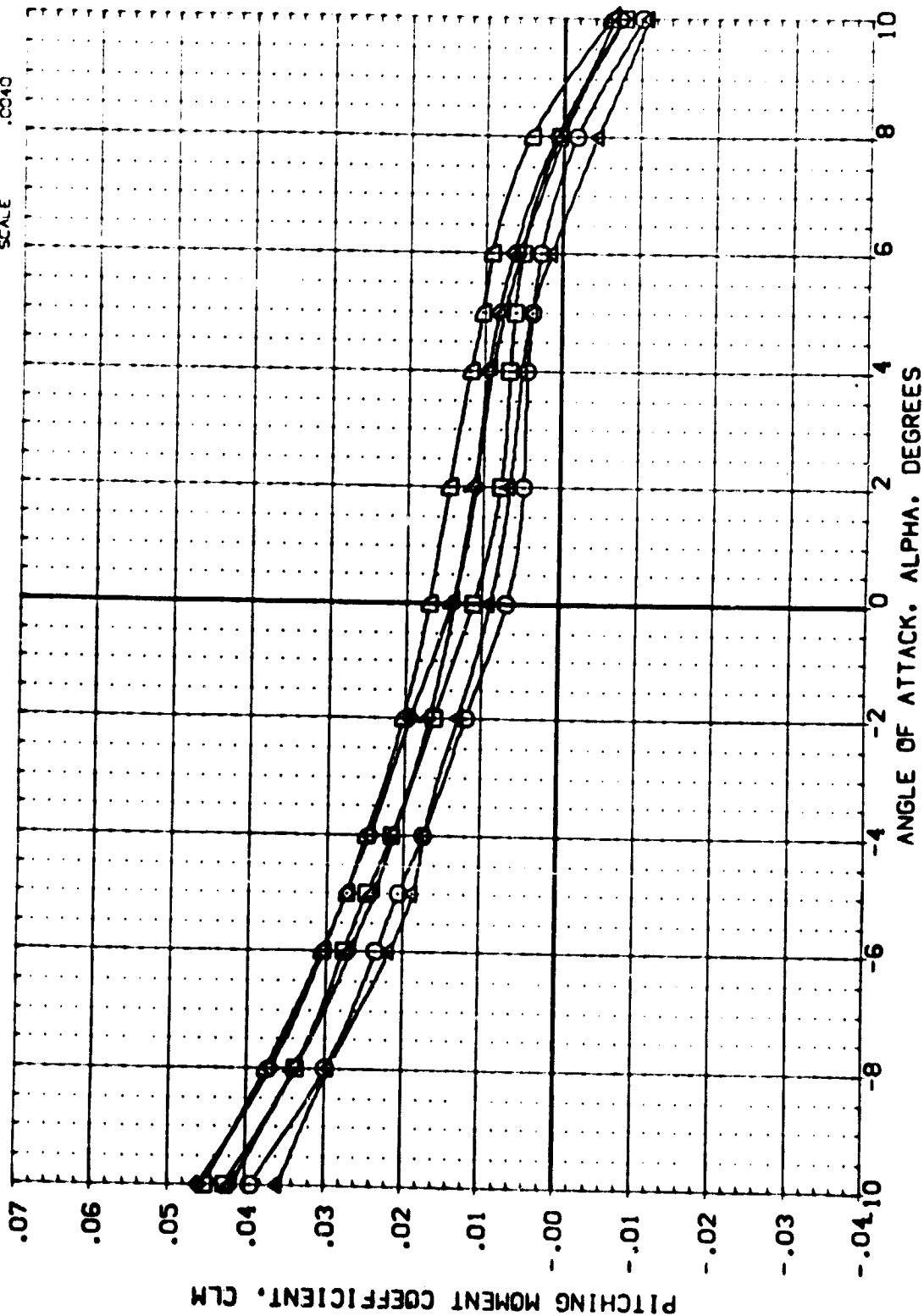
(C83T01)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
(C83T02)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
(C83T03)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
(C83T04)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
(C83T05)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
(C83T06)	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)

BETA ORB, INC DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SO, IN
LREF	5.3130	
BREF	5.3130	
XMAP	2.5490	
YMAP	.0000	
ZMAP	.0000	
SCALE	.0040	



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (S3/2)/(S3/2)

(T9)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

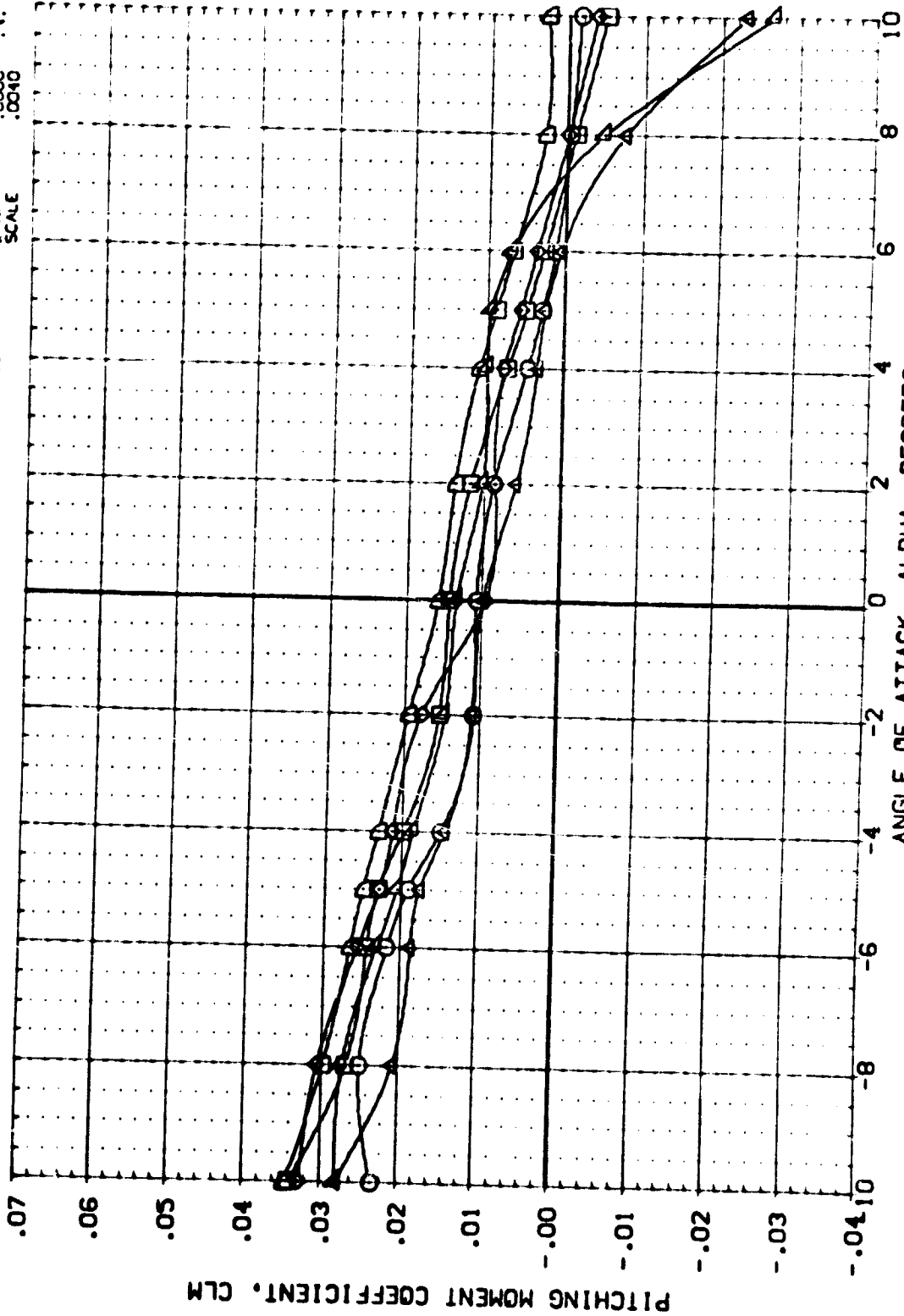
(C83T01)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T02)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T03)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T04)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T05)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T06)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)

BETA DBBINC DELTAZ

.000	-.500	.140
.000	-.500	.140
.000	-.500	.140
.000	-.500	.260
.000	-.500	.260
.000	-.500	.260

REFERENCE INFORMATION

SREF	6.198C	SO	IN
LREF	5.313C	IN	IN
BREF	5.313C	IN	IN
XMRP	2.549C	IN	IN
YMRP	.000C	IN	IN
ZMRP	.000C	IN	IN
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 4.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

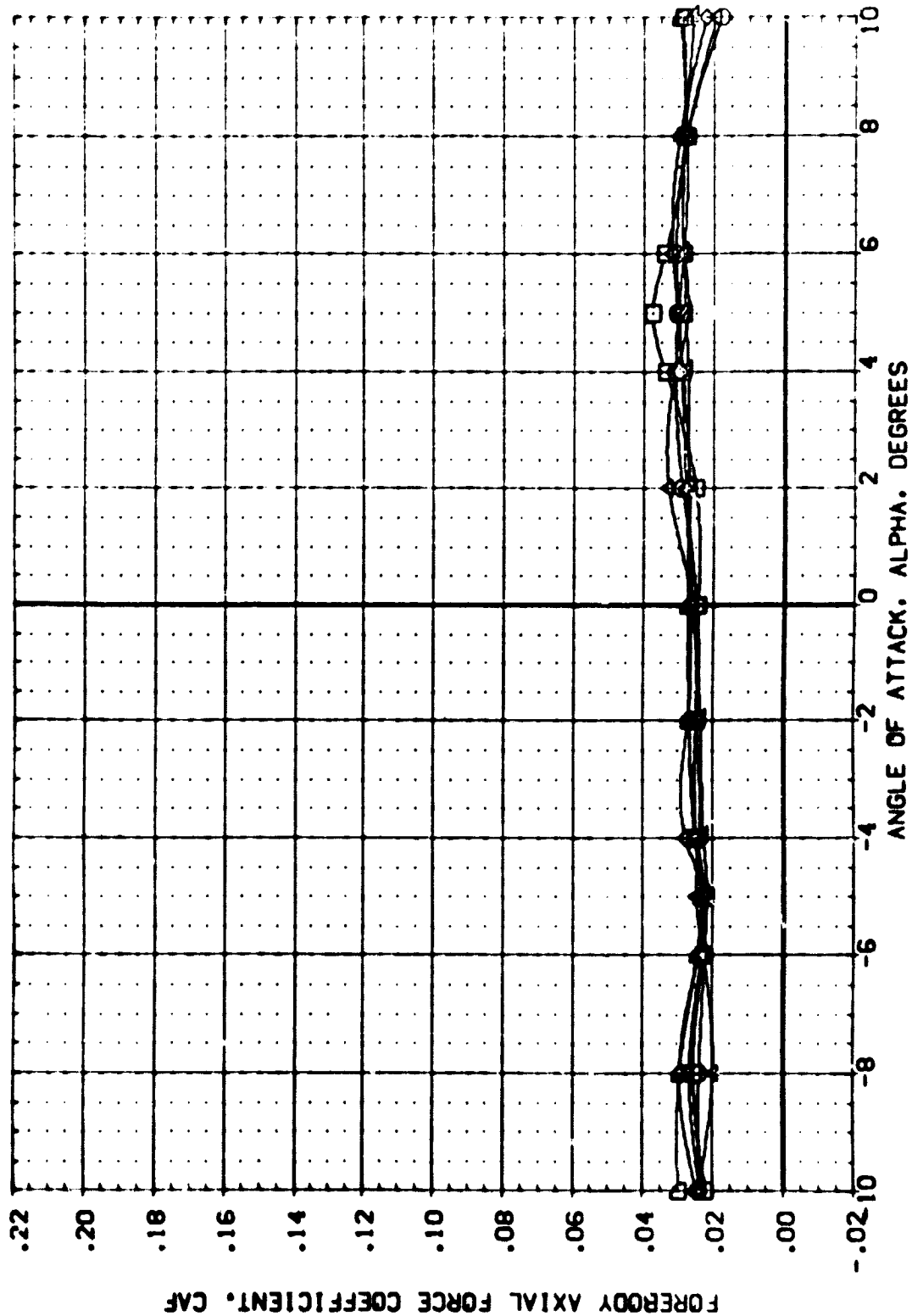
(C03T01)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)
(C03T02)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)
(C03T03)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)
(C03T04)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)
(C03T05)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)
(C03T06)	M5FC	S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ

.000	-.500	.120
.000	-.500	.140
.000	-.500	.140
.000	-.500	.280
.000	-.500	.280
.000	-.500	.280

REFERENCE INFORMATION

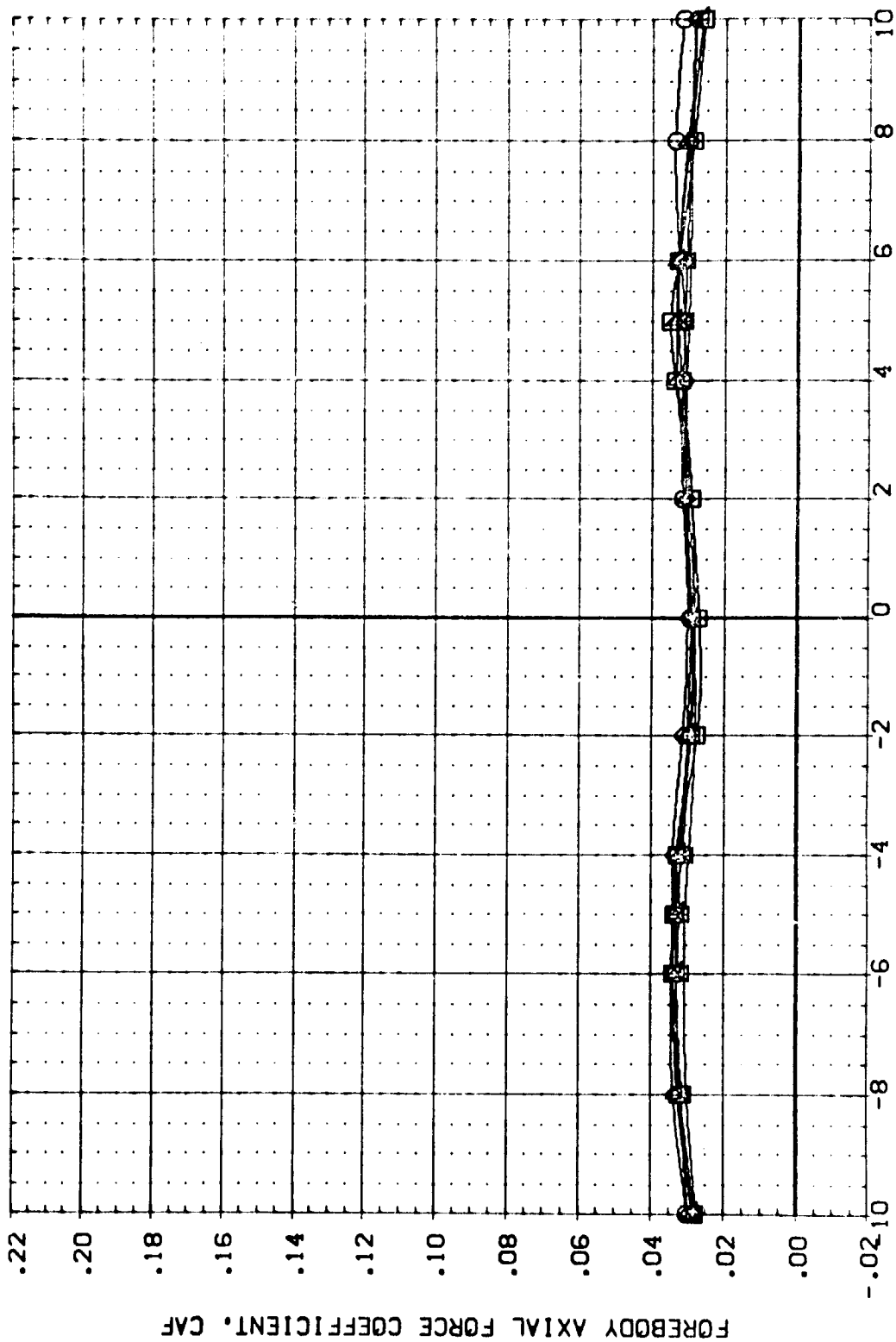
SREF	6.1980	SQ	IN
LREF	5.3130	SQ	IN
BREF	5.3130	SQ	IN
XMRP	2.5490	SQ	IN
YMRP	.0000	SQ	IN
ZMRP	.0000	SQ	IN
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83102)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83103)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83104)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83105)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83106)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(B)MACH = .80

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83T01) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(C83T02) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(C83T03) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(C83T04) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(C83T05) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(C83T06) MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ

.000 .500 .140

.000 .500 .140

.000 .500 .140

.000 .500 .280

.000 .500 .280

.000 .500 .280

REFERENCE INFORMATION

SREF 6.1980 SQ. IN

LREF 5.3130 IN

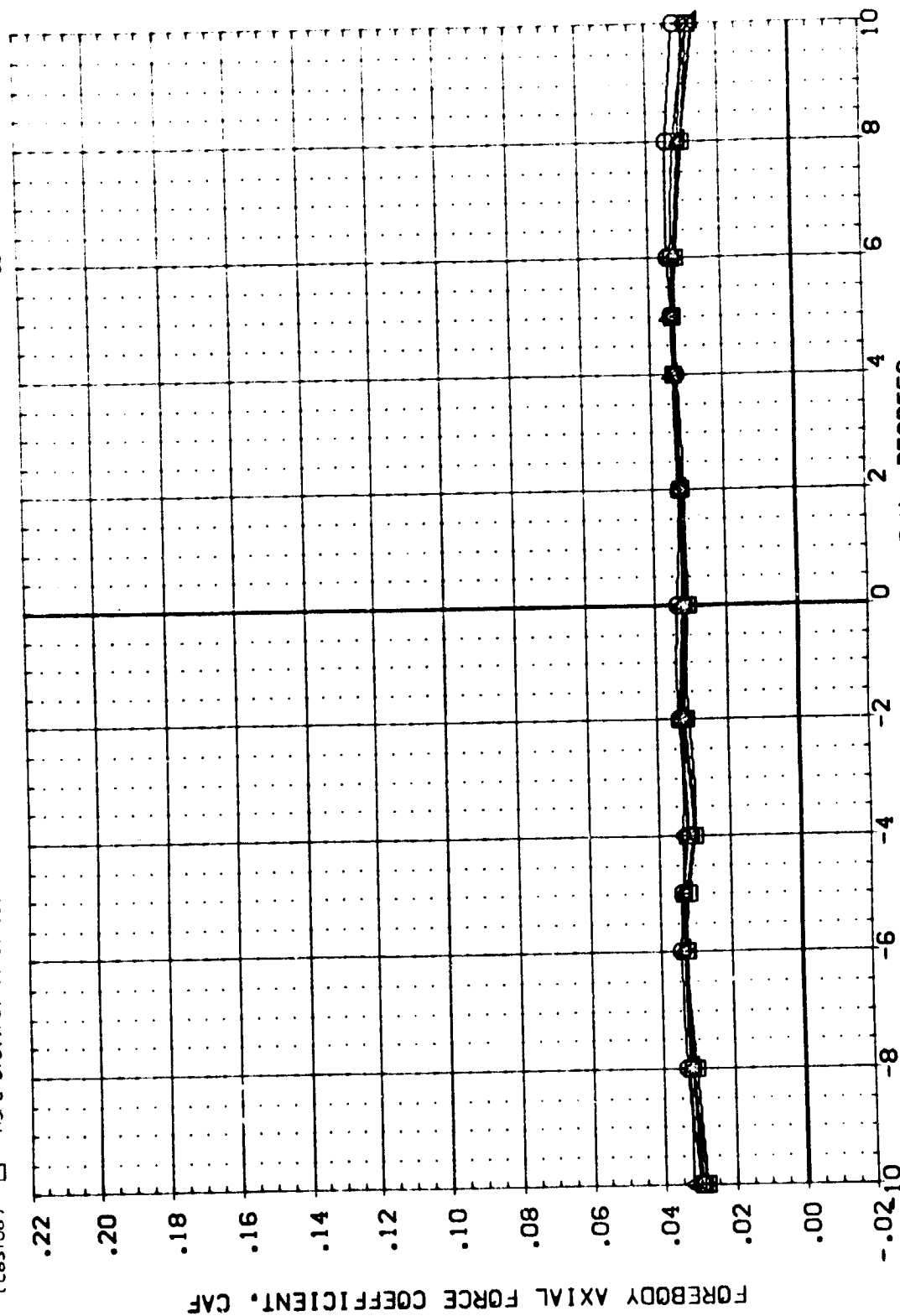
BREF 5.3130 IN

XMRP 2.5480

YMRP .0000

ZMRP .0000

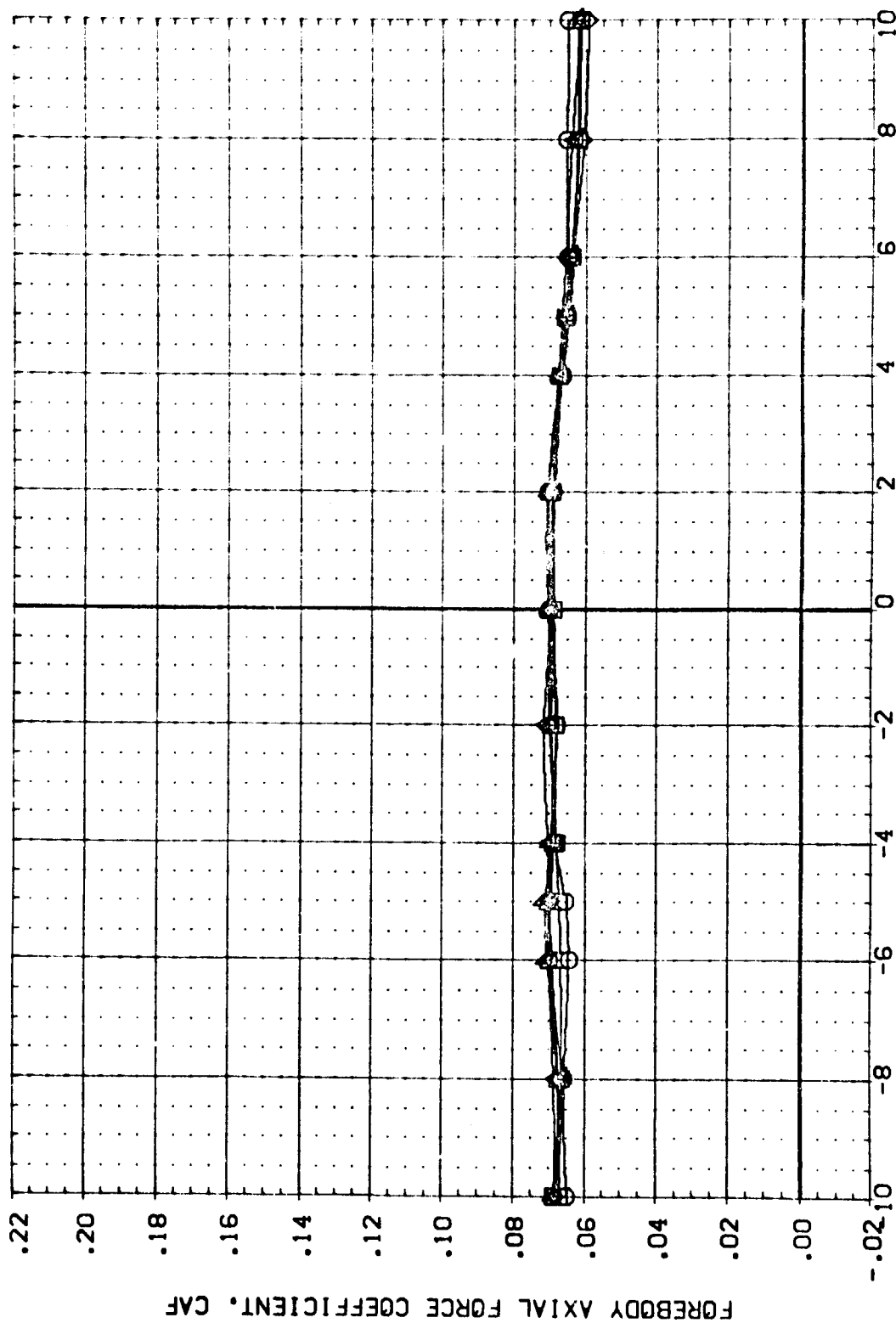
SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORIGIN	DELTA	REFERENCE INFORMATION
(C83T01)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 50. IN
(C83T02)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 N.
(C83T03)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 N.
(C83T04)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 N.
(C83T05)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 N.
(C83T06)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



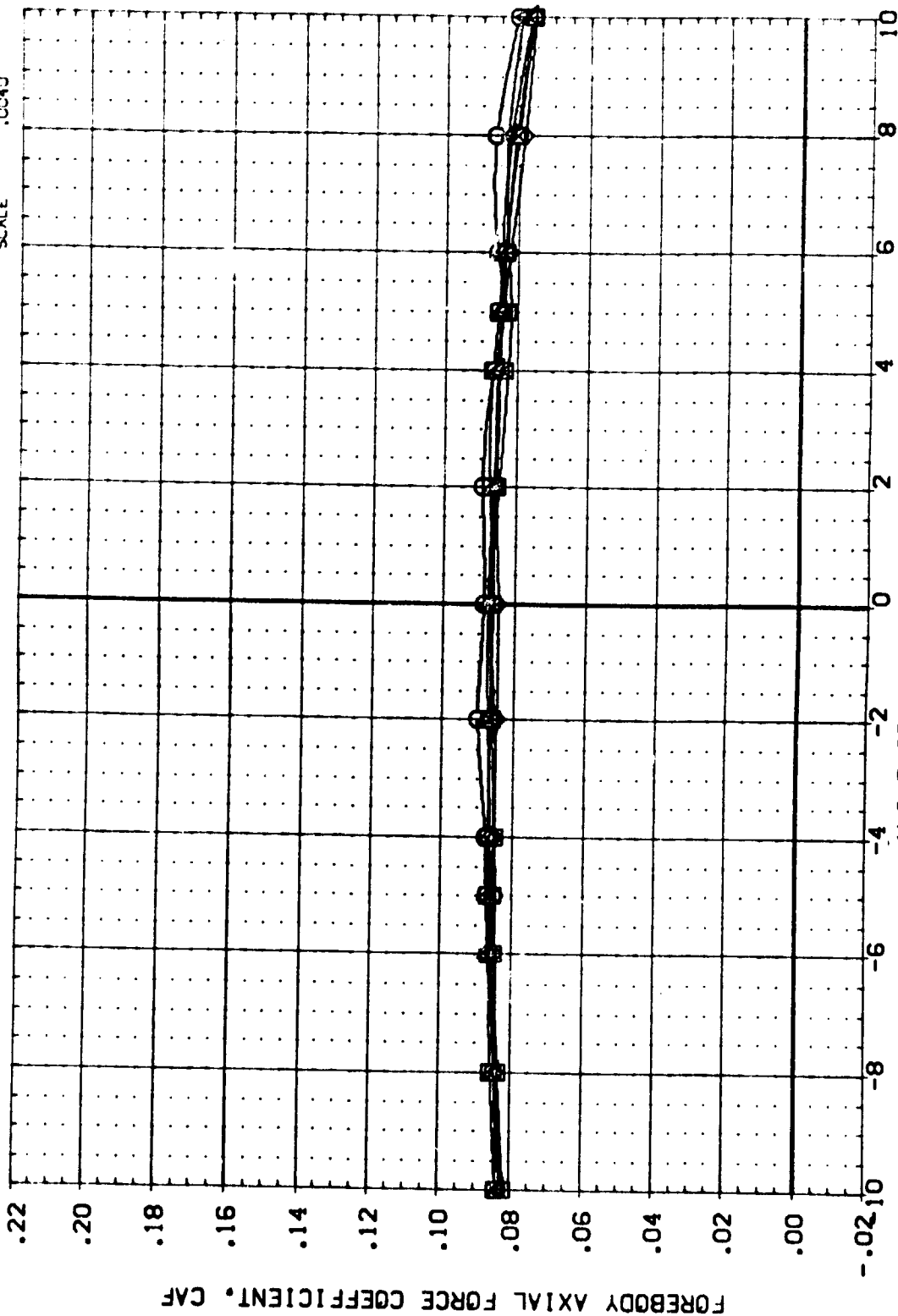
STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

COMACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83T01) MSFC 570((A31F)(T9)/(03)/(S3/2))
 (C83T02) MSFC 570((A31F)(T9)/(03)/(S3/2))
 (C83T03) MSFC 570((A31F)(T9)/(03)/(S3/2))
 (C83T04) MSFC 570((A31F)(T9)/(03)/(S3/2))
 (C83T05) MSFC 570((A31F)(T9)/(03)/(S3/2))
 (C83T06) MSFC 570((A31F)(T9)/(03)/(S3/2))

BETA ORBINC DELTAZ
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .280
 .000 .500 .280
 .000 .500 .280

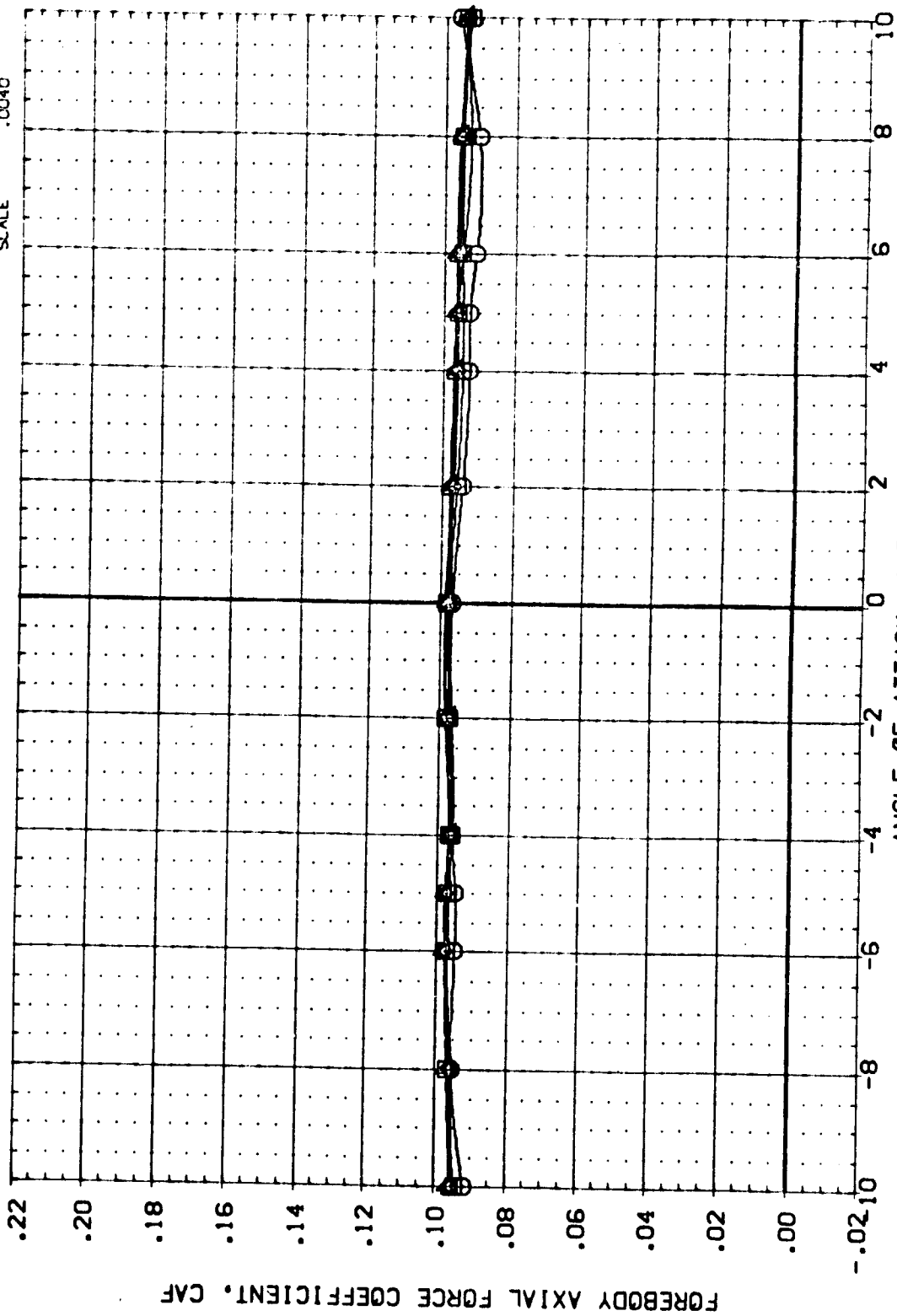
REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.140	SREF 6.1980 SQ. IN.
(C83T02)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83T03)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.280	YMRP 2.5490 IN.
(C83T05)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.280	ZMRP .0000 IN.
(C83T06)	MSFC 570((A3IF)(T9)/(03)/(S3/2)/(S3/2))	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 1.46

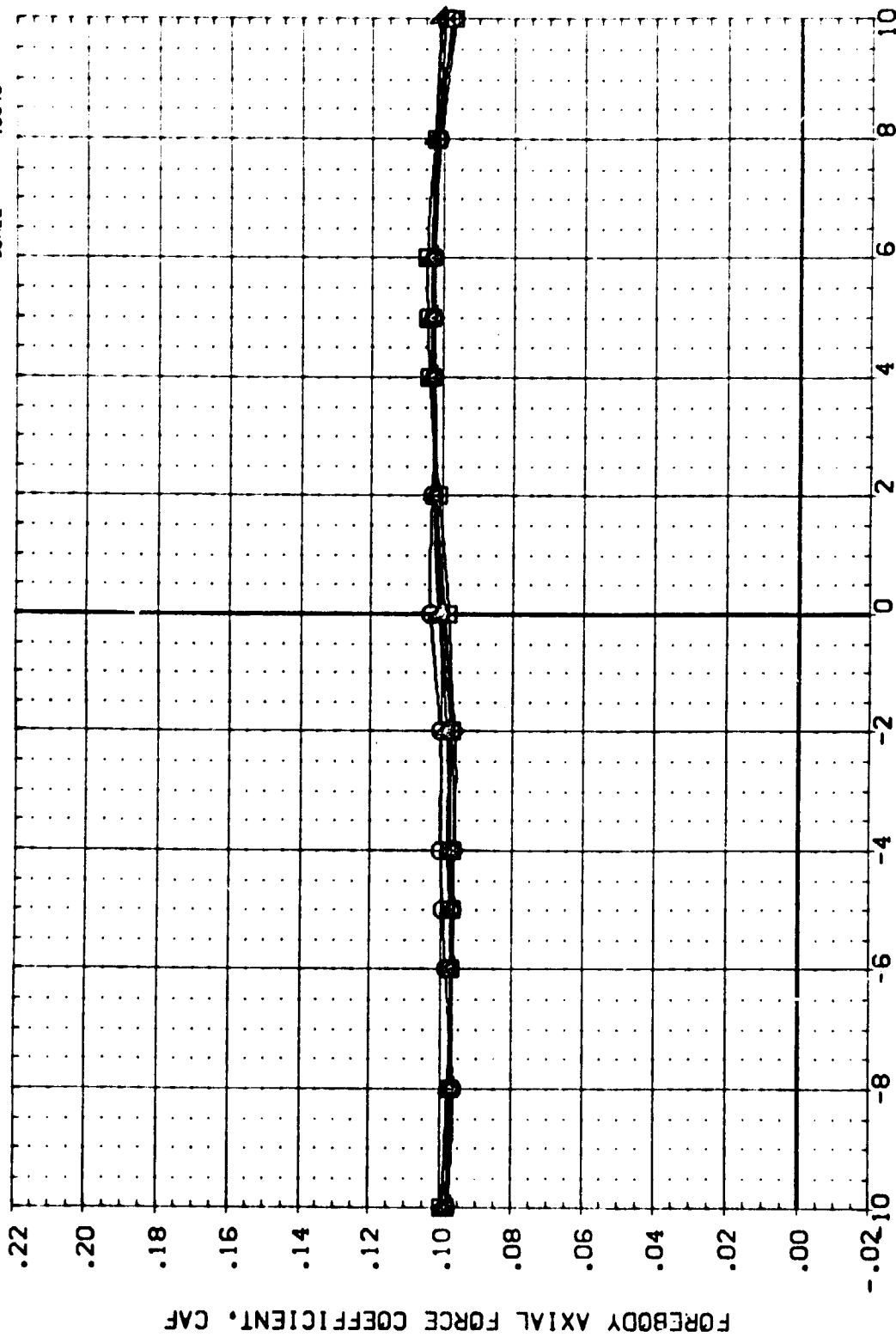
DATA SET SYMBOL

CONFIGURATION DESCRIPTION

BETA

ORBITAL DELTA Z

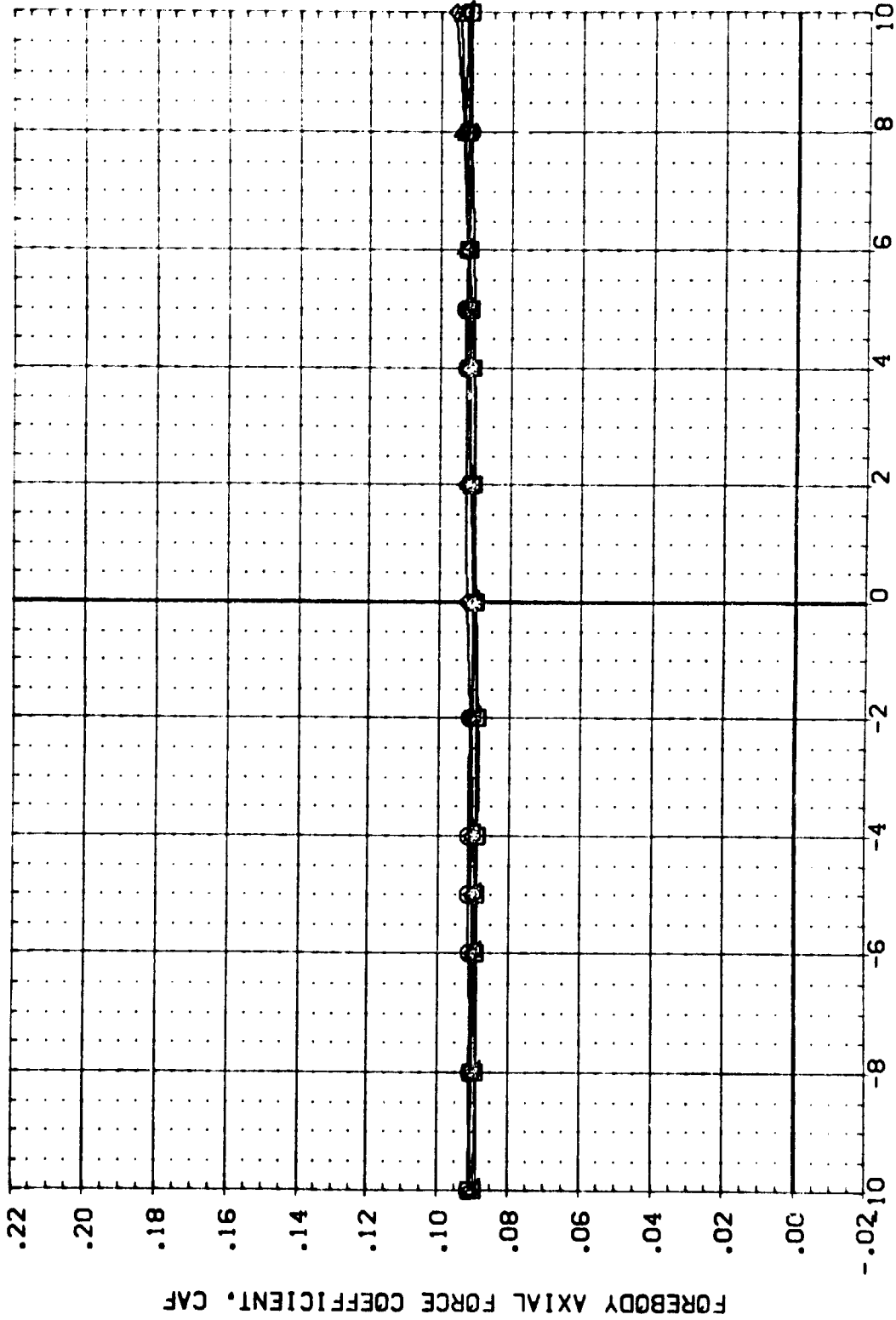
REFERENCE INFORMATION



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(G)MACH = 1.96

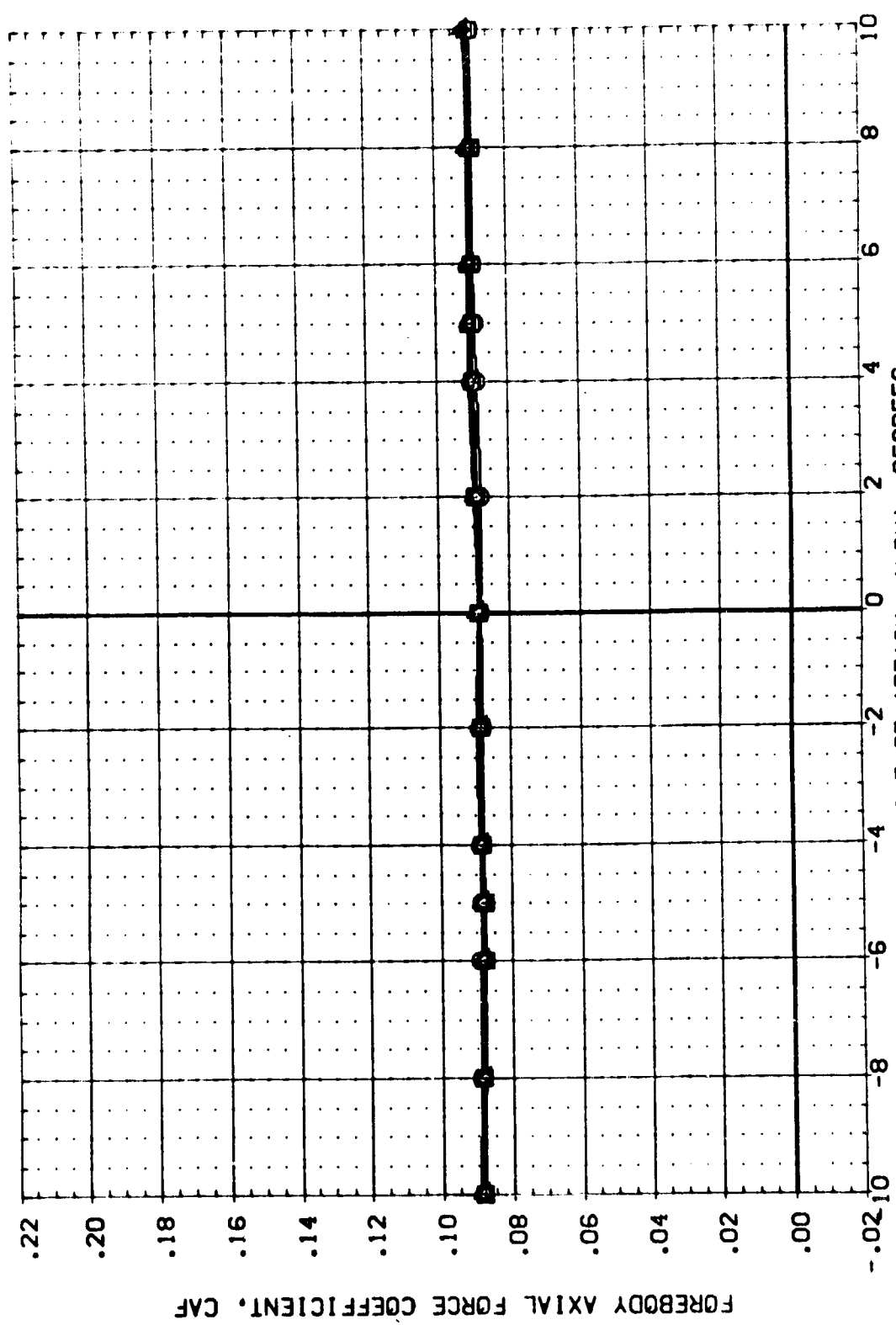
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83T02)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83T03)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP 2.5490 IN.
(C83T05)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	.500	.280	YMRP .0000 IN.
(C83T06)	MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(H)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DRB INC	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1960
(C83T02)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5480
(C83T05)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(1)MACH = 3.48



DATA SET SYMBOL CONFIGURATION DESCRIPTION

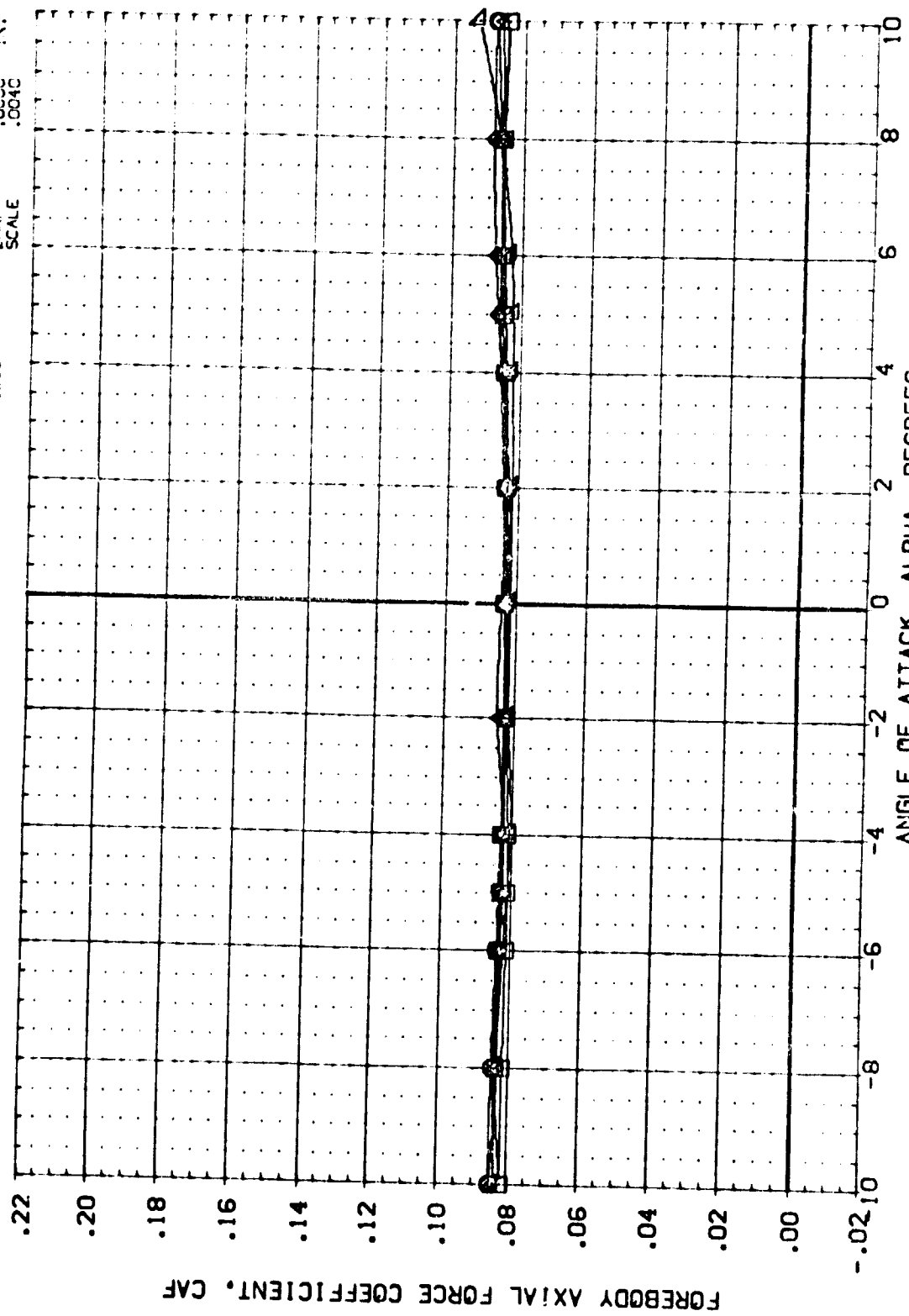
(C83T01)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)
(C83T02)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)
(C83T03)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)
(C83T04)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)
(C83T05)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)
(C83T06)	MSFC	570	(A3IF)	(T9)	(O3)	(S3/2)	(S3/2)

BETA ORB INC DELTA Z

.000	-.500	.140
.000	.500	.140
.000	1.500	.140
.000	-.500	.280
.000	.500	.280
.000	1.500	.280

REFERENCE INFORMATION

SREF	6.1980	SC	IN
LREF	5.3130	IN	IN
BREF	5.3130	IN	IN
XMRP	2.5490	IN	IN
YMRP	.0000	IN	IN
ZMRP	.0000	IN	IN
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(J)MACH = 4.96

DATA SET SYMBOL CONFIGURATION DESCRIPTION

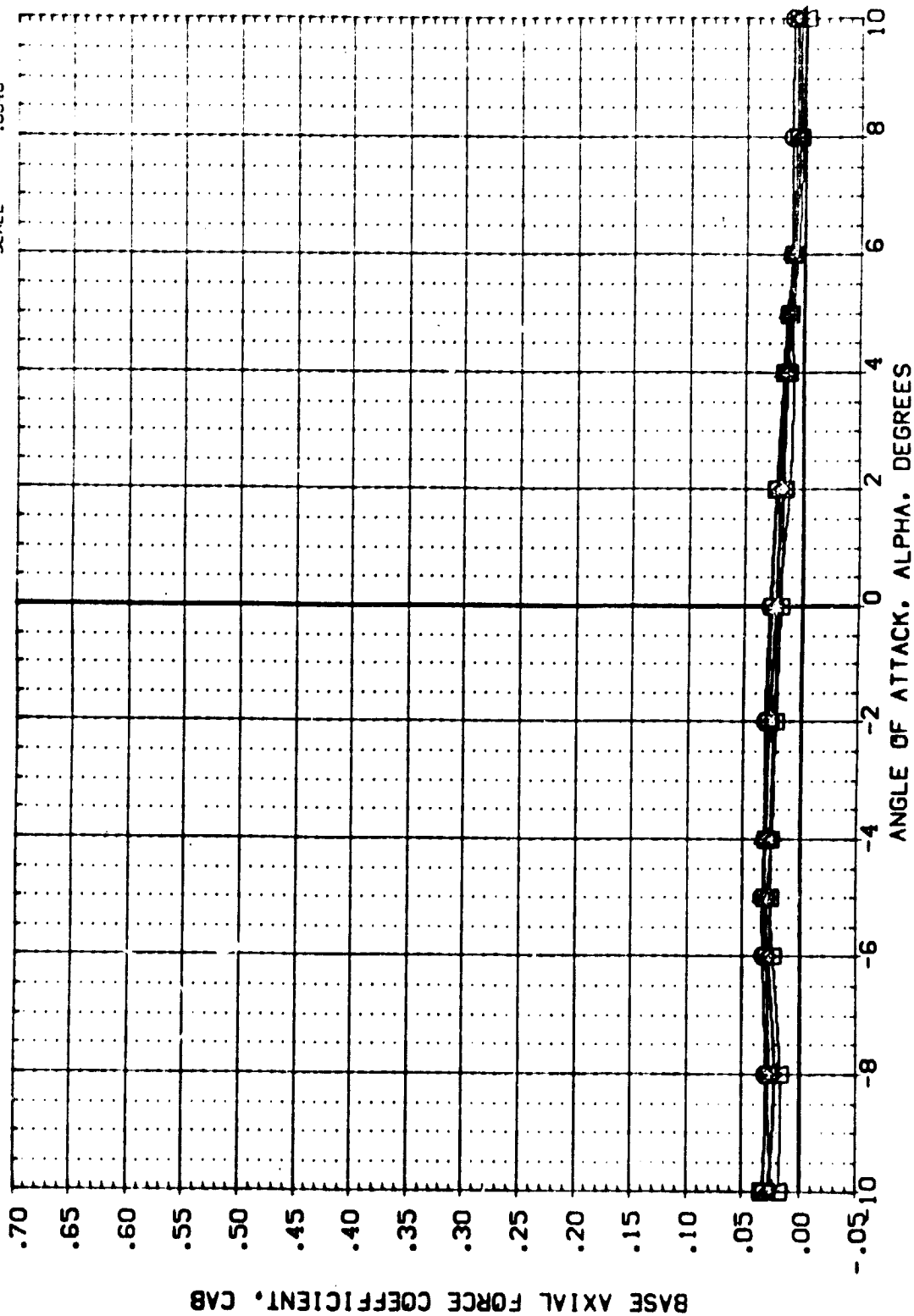
(C83T01)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T02)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T03)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T04)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T05)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)
(C83T06)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)

BETA ORBITAL DELTAZ

.000	.500	.140
.000	.500	.140
.000	.500	.140
.000	.500	.280
.000	.500	.280
.000	.500	.280

REFERENCE INFORMATION

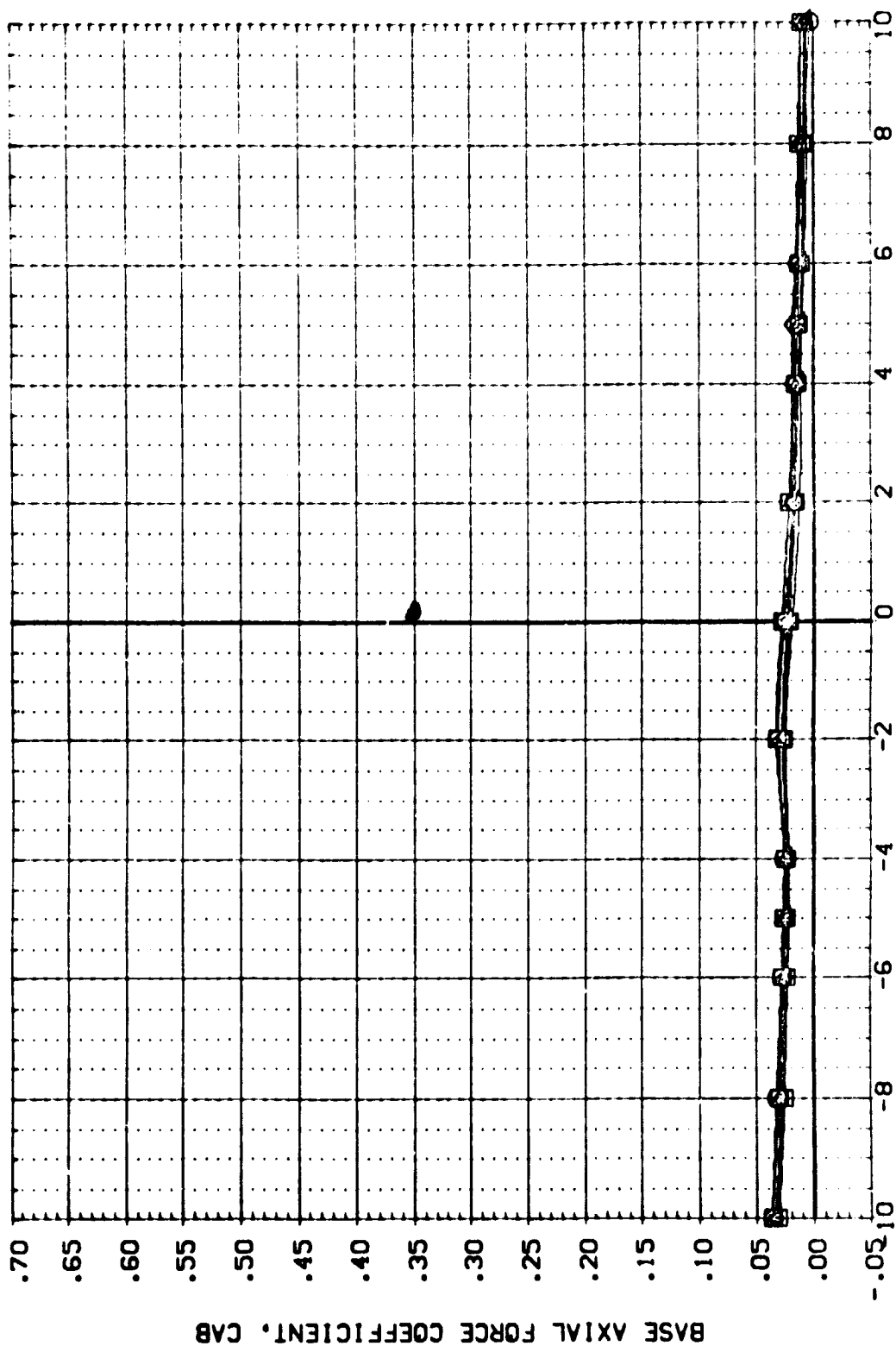
SREF	5.1980	50. IN
LREF	5.3130	N.
BREF	5.3130	N.
XMOP	2.5490	N.
YMOP	.0000	N.
ZMOP	.0000	N.
SCALE	.0010	



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .60

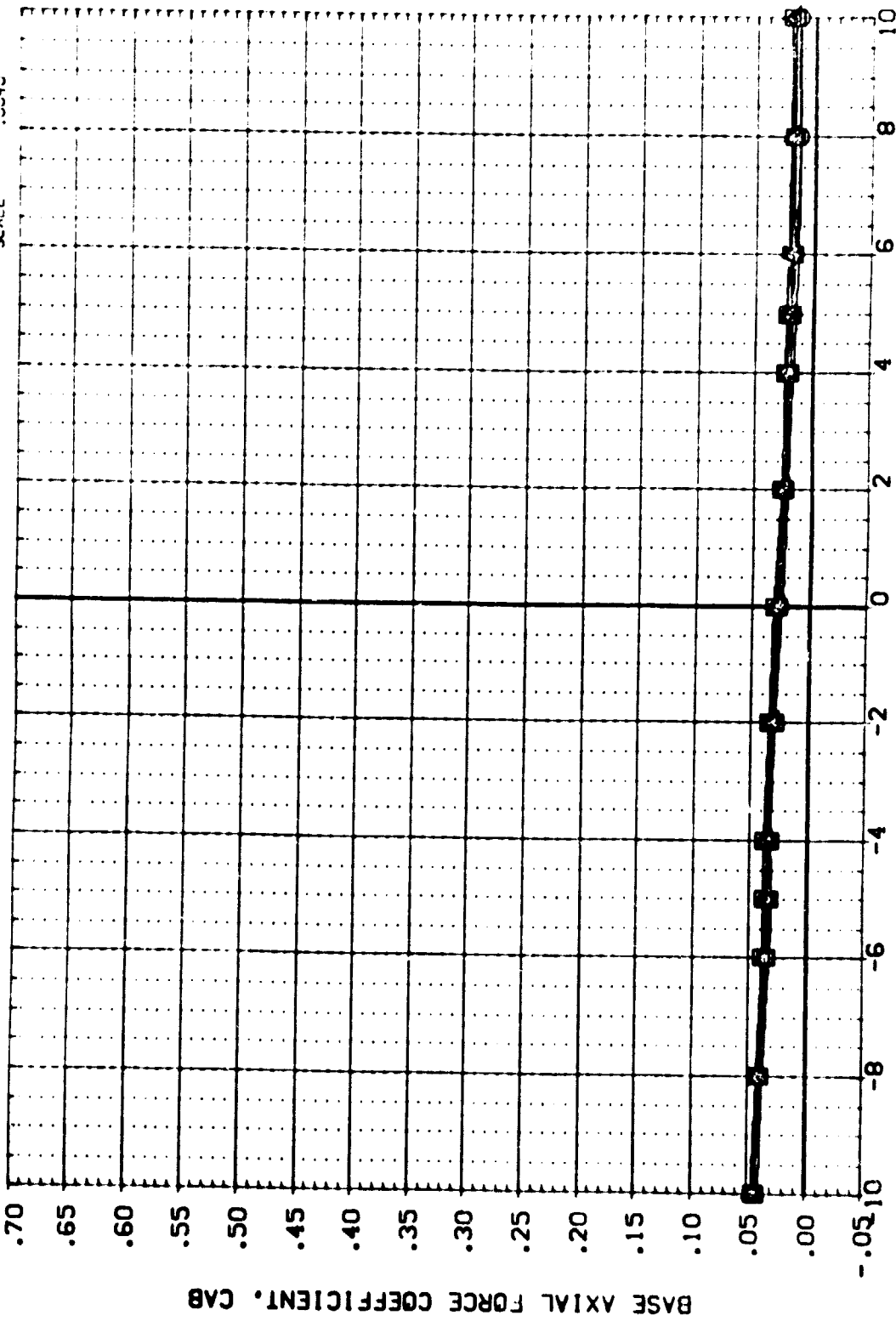
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83102)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83103)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83104)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83105)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83106)	MSFC 5701(A31F)(T9)/(Q3)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (Q3)/(S3/2)/(S3/2)

(B)MACH = .80

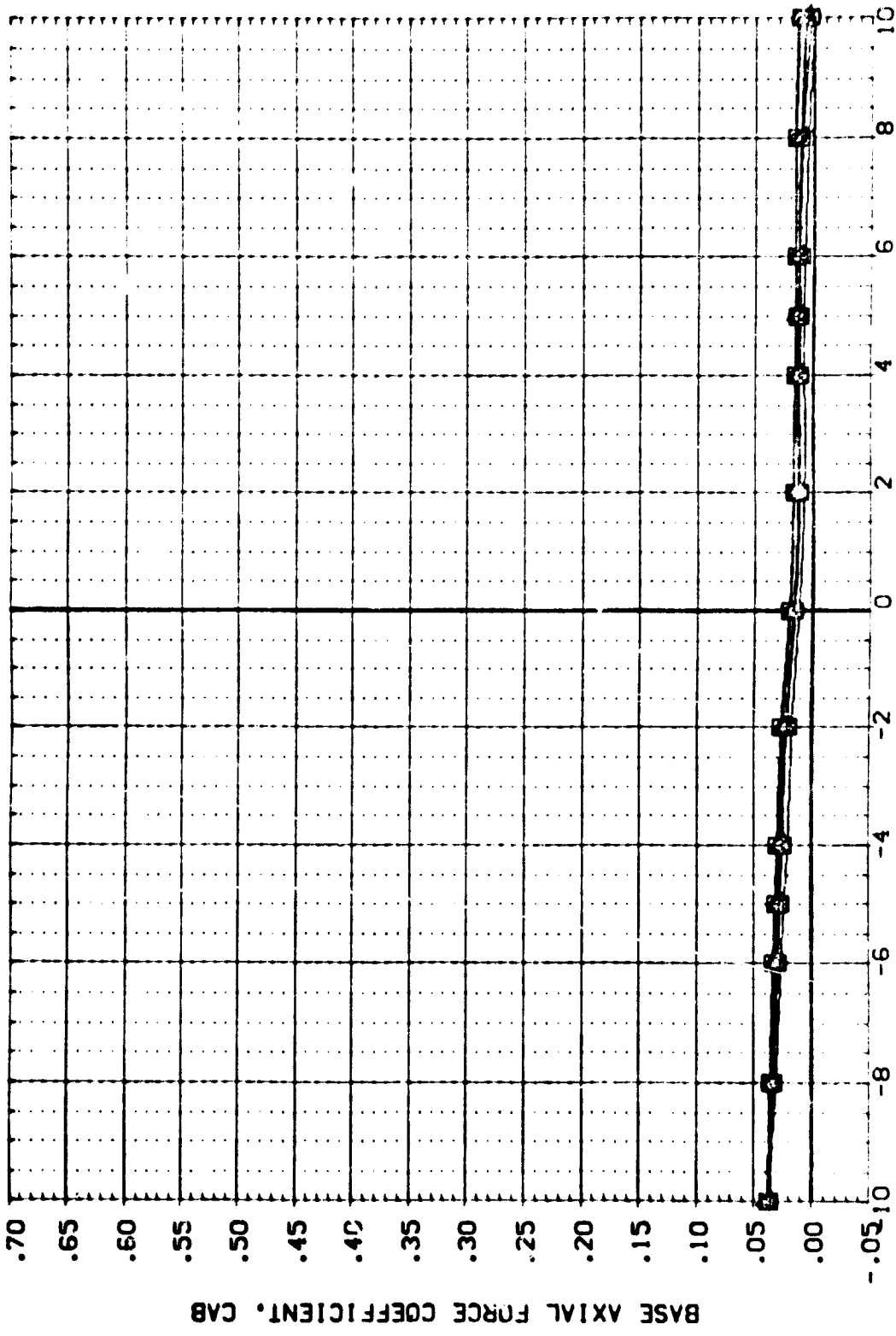
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[C83T01]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.140	SREF 6.1980
[C83T02]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.140	LREF 5.3130
[C83T03]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.140	BREF 5.3130
[C83T04]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.280	ZMRP 2.5490
[C83T05]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.280	ZMRP .0000
[C83T06]	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

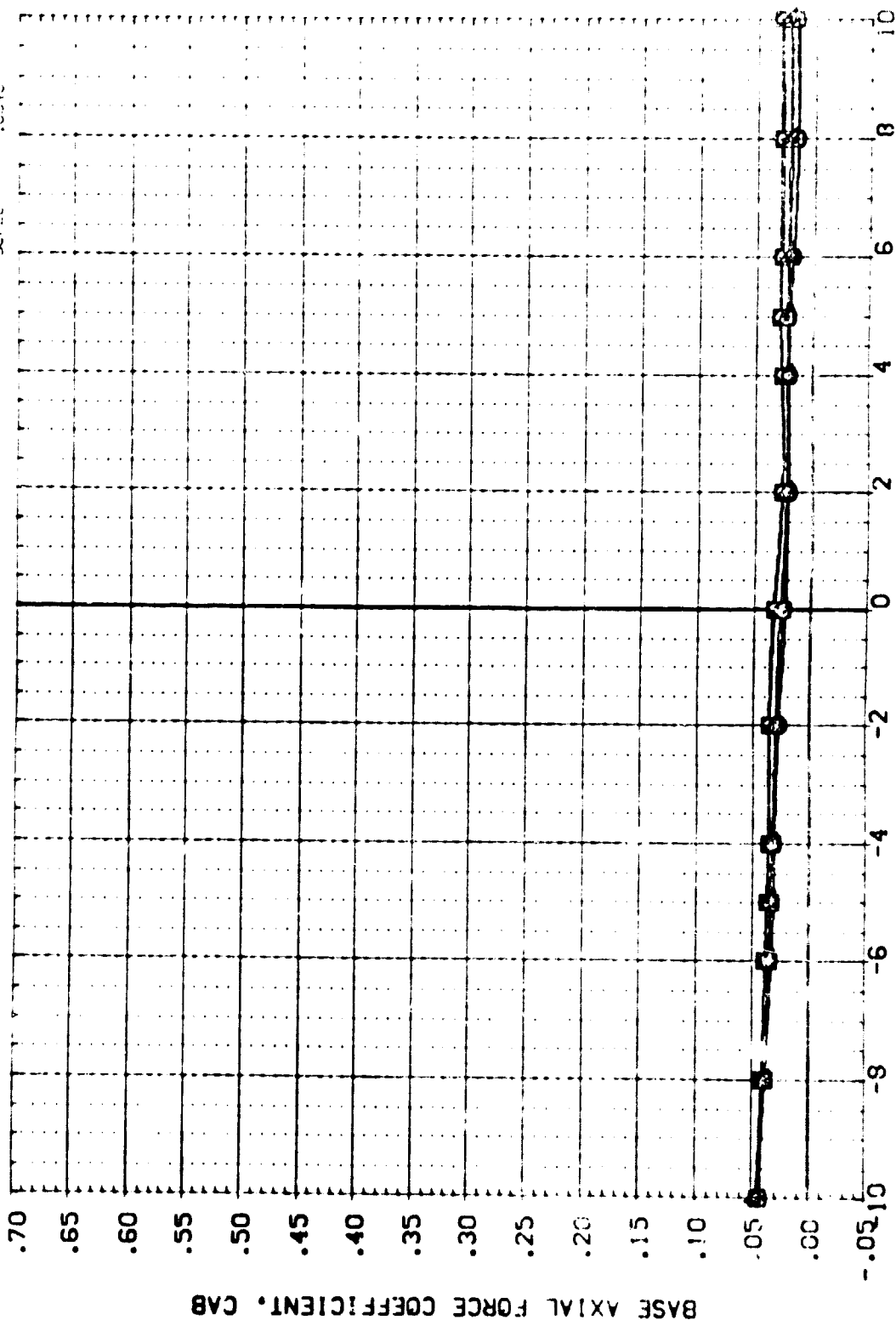
(C)MACH = .90

DATA SET SYMB.	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83101)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83102)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83103)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83104)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-.500	.280	XREF 2.5490
(C83105)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	.500	.280	YREF .0000
(C83106)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZREF .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

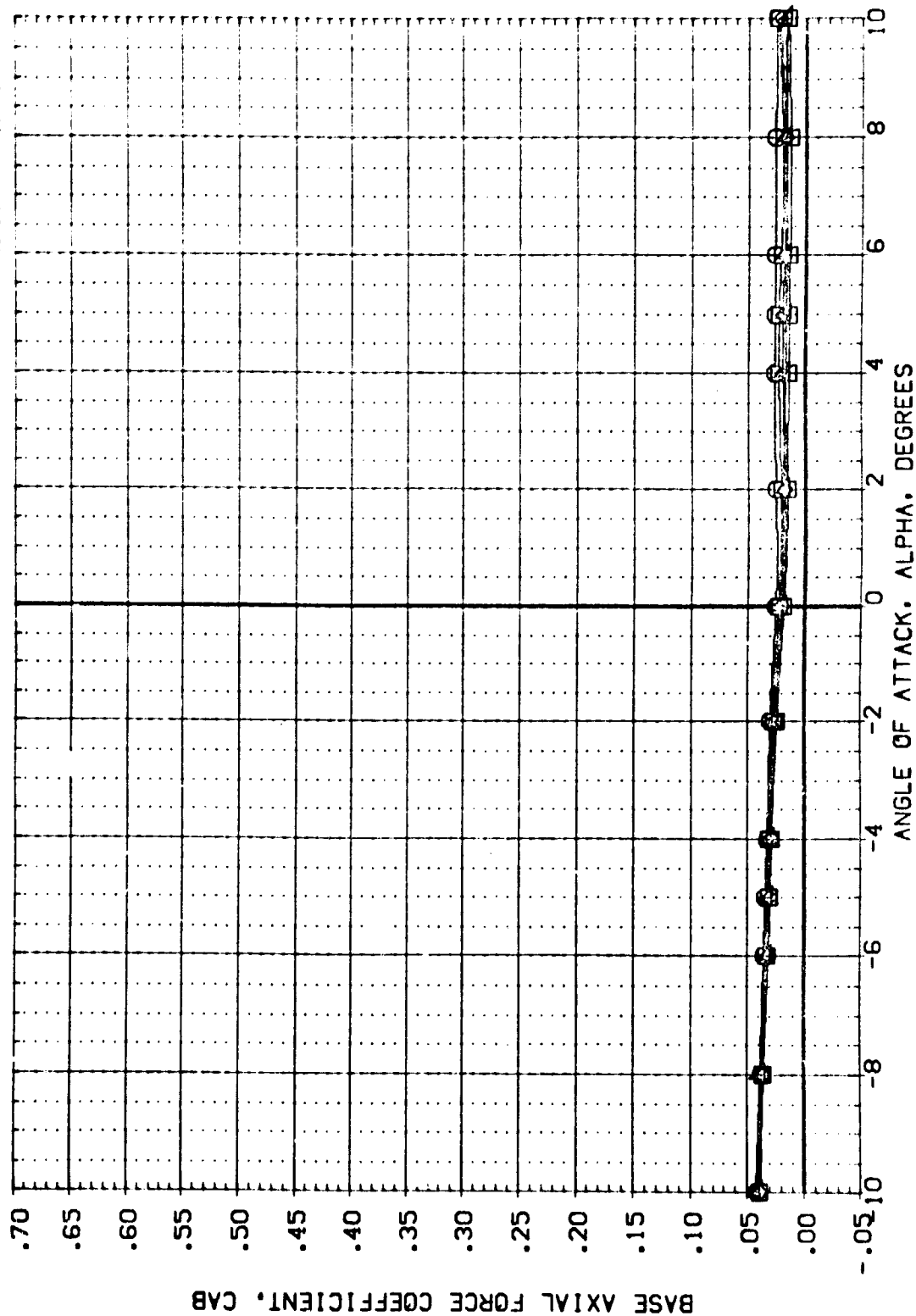
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83)01	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1983
(C83)02	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.3133
(C83)03	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.3133
(C83)04	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YREF 2.1493
(C83)05	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YREF .0000
(C83)06	MSFC S70(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZREF .0000
					SCALE .0000



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

VELOCITY = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SC IN
(C83T02)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83T03)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83T04)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN
(C83T05)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83T06)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN
				SCALE	.0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83T01) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

(C83T02) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

(C83T03) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

(C83T04) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

(C83T05) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

(C83T06) MSFC 570((A31F)((T9)/(03)))/(S3/2)/(S3/2)

BETA ORB INC DELTA Z

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .280

.000 .500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980

LREF 5.3130

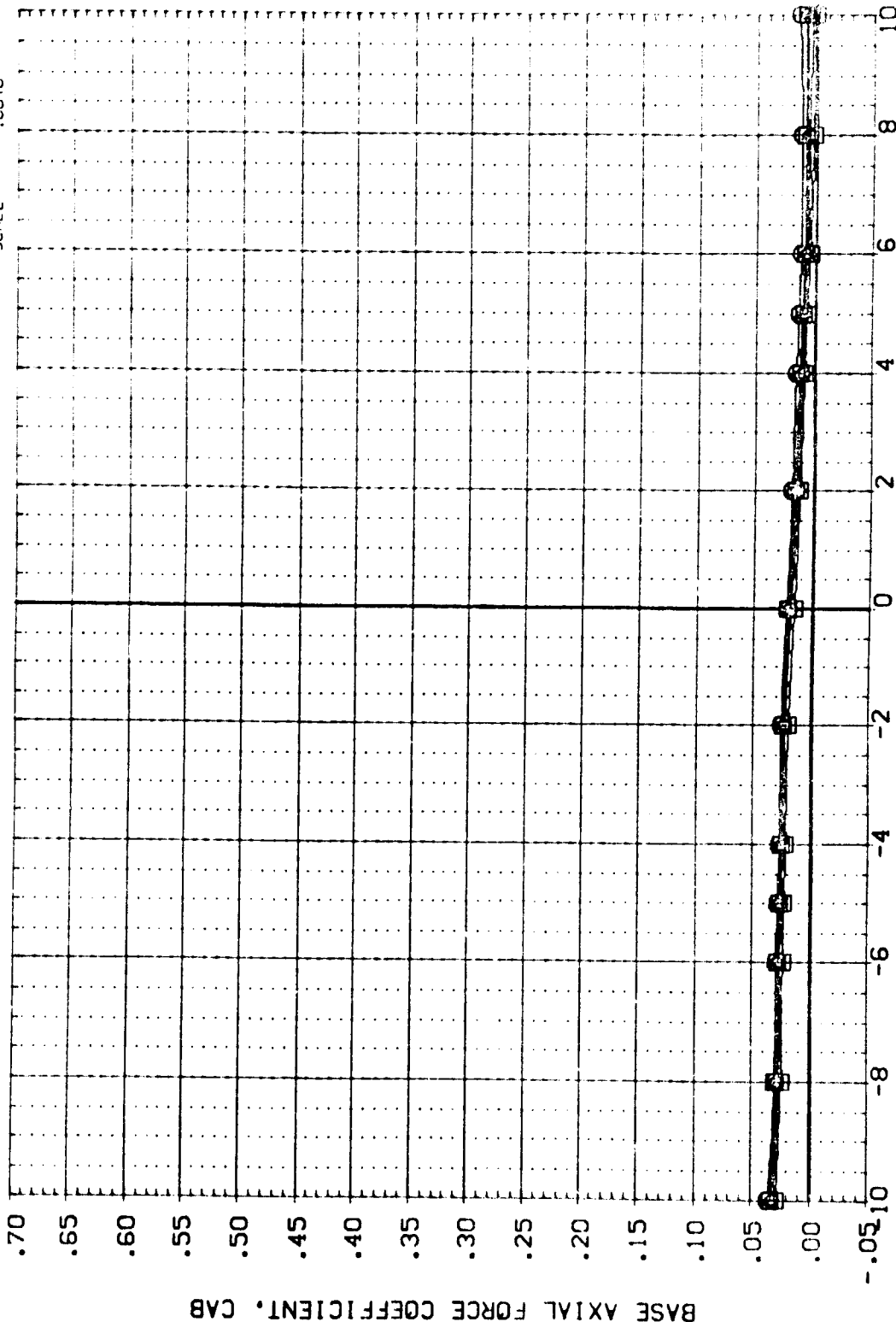
BREF 5.3130

XMRP 2.5490

YMRP .0000

ZMRP .0000

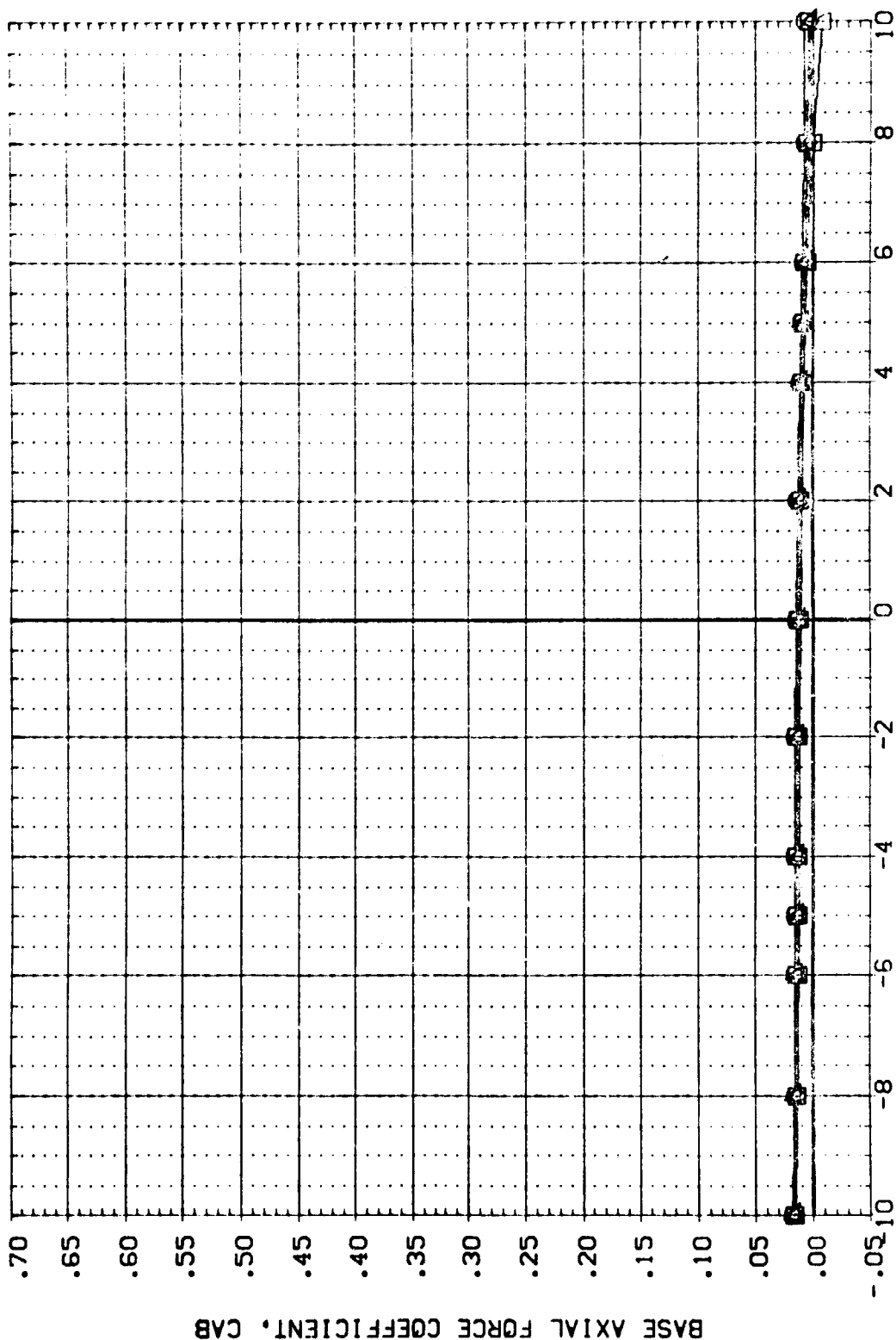
SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(G)MACH = 1.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83T02)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83T03)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83T04)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83T05)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83T06)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(H)MACH = 2.99

DATA SET SYMBOL
 (C83T01)
 (C83T02)
 (C83T03)
 (C83T04)
 (C83T05)
 (C83T06)

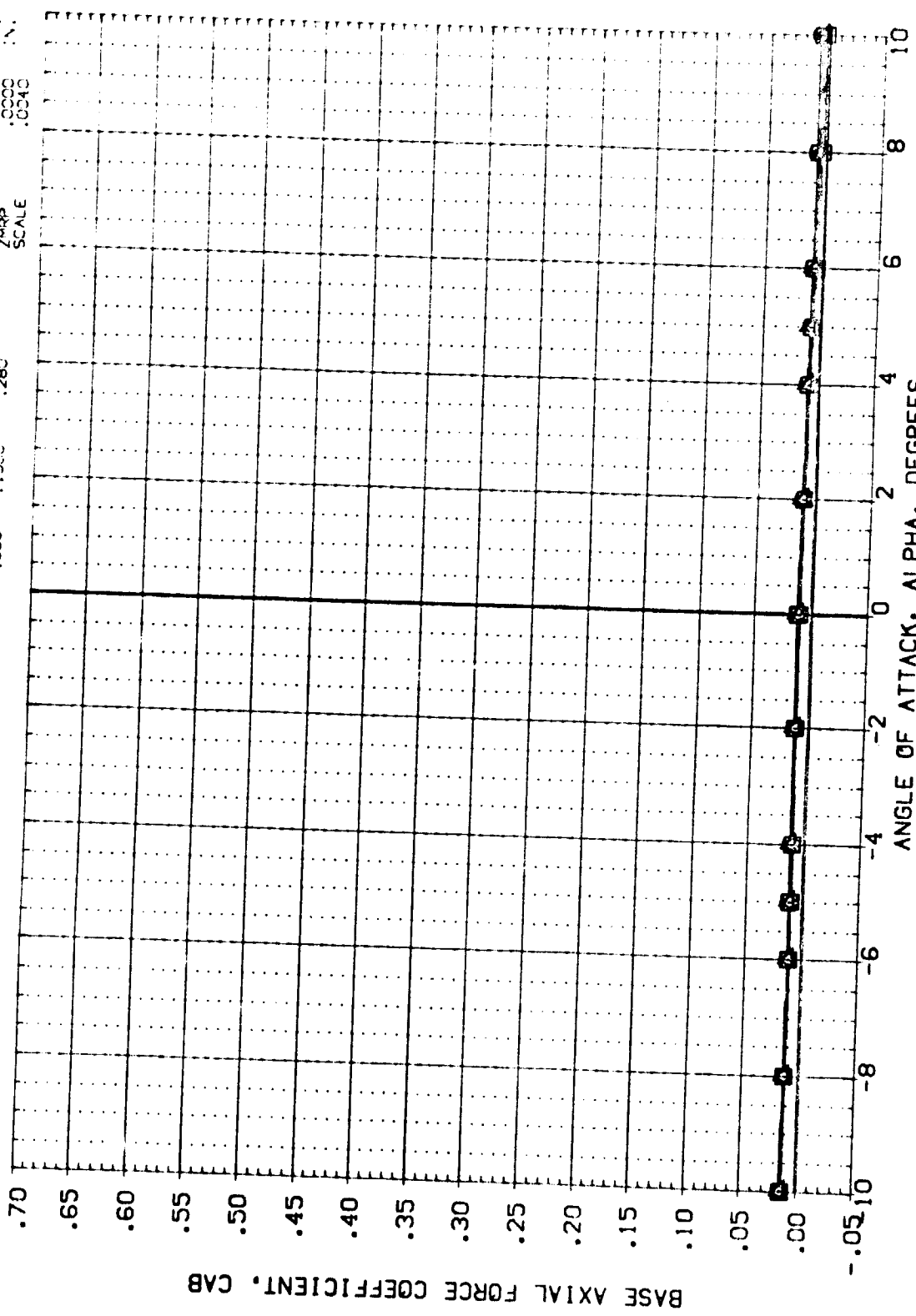
CONFIGURATION DESCRIPTION
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))
 MSFC 570((A3IF)(T9)/(S3/2)/(S3/2))

BETA
 .000
 .000
 .000
 .000
 .000
 .000

ORBITAL INC
 -.500
 .500
 1.500
 -.500
 .500
 1.500

DELTA Z
 .140
 .140
 .140
 .280
 .280
 .280

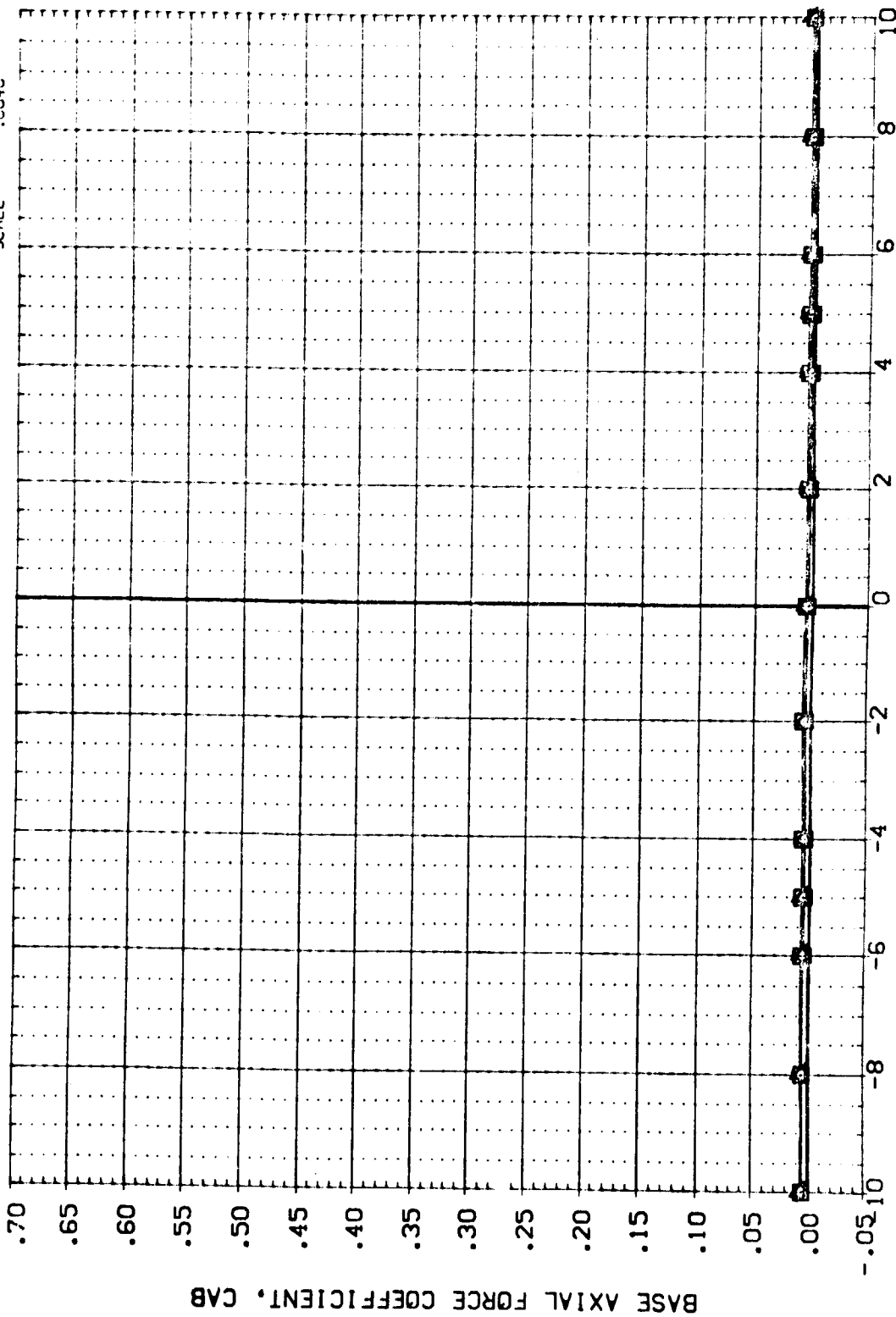
REFERENCE INFORMATION
 SPREF 6.1980 SQ
 LREF 5.3130
 BRREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)
 (1)MACH = 3.48



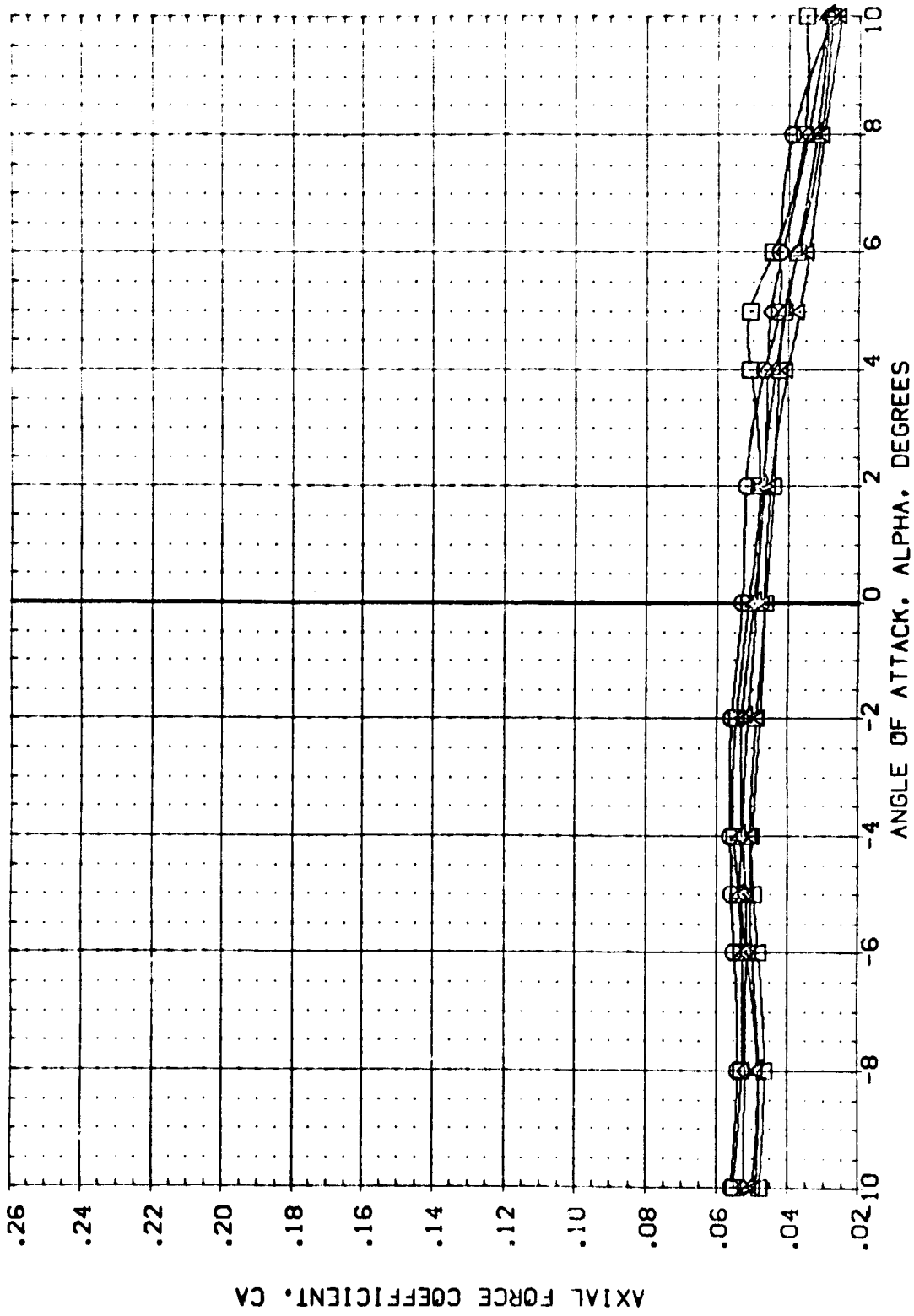
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83T02)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5480
(C83T05)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(J)MACH = 4.96

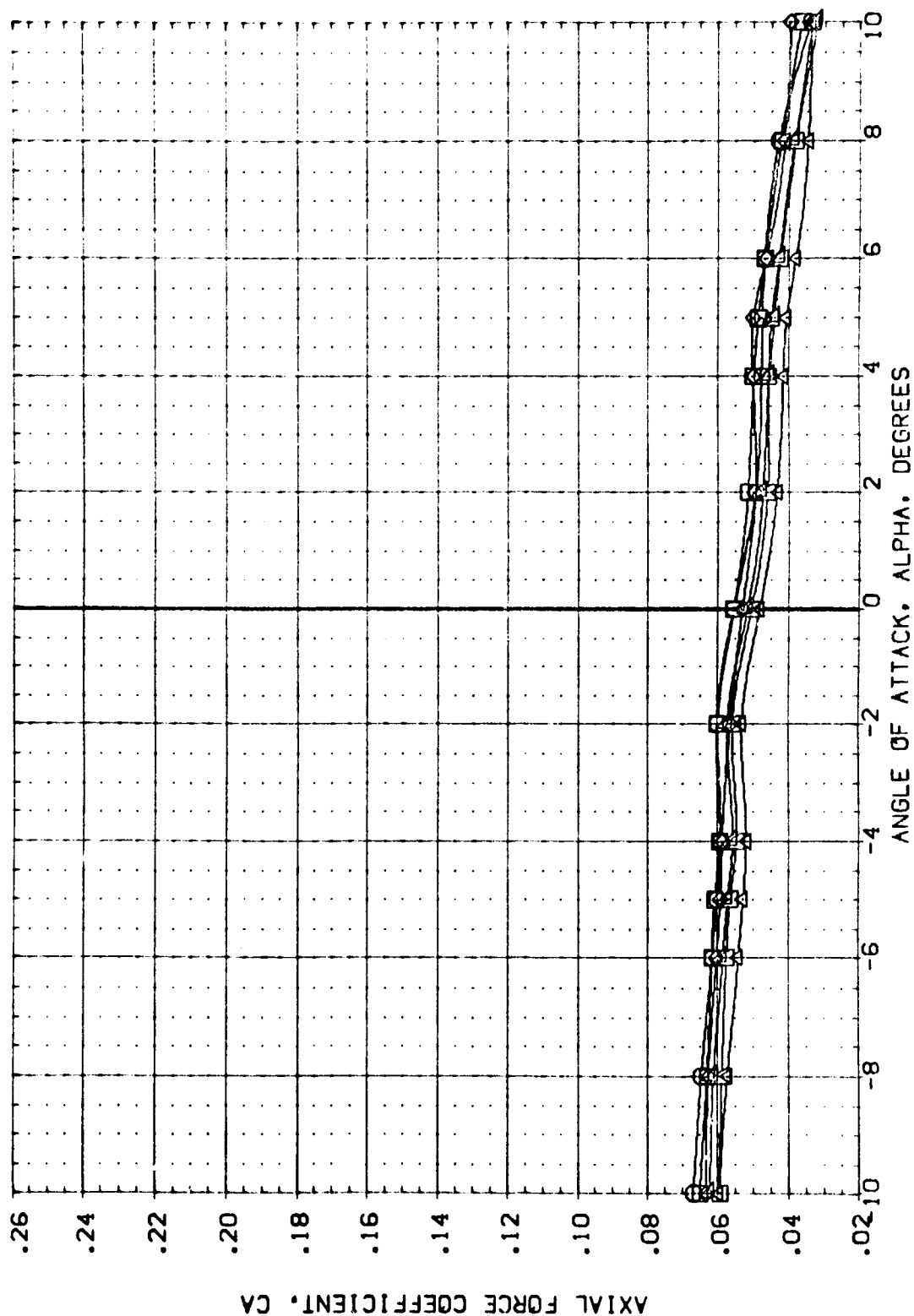
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	-.500	.140	SREF 6.1980
(C83T02)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	1.500	.140	BREF 2.5490
(C83T04)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	-.500	.280	XMRP .0000
(C83T05)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 570((A3IF)(T9)/(O3)/(S3/2))	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(M)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1980
(C83T02)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	-.500	.140	LREF 5.3130
(C83T03)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	-.500	.280	YMRP 2.5490
(C83T05)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP .0000
(C83T06)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(03)MACH = .80

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83T01) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

(C83T02) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

(C83T03) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

(C83T04) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

(C83T05) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

(C83T06) MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

BETA ORB INC DELTA Z

.000 -.500 .140

.000 .500 .140

.000 1.500 .140

.000 -.500 .280

.000 1.500 .280

.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980 50. IN

LREF 5.3130 IN

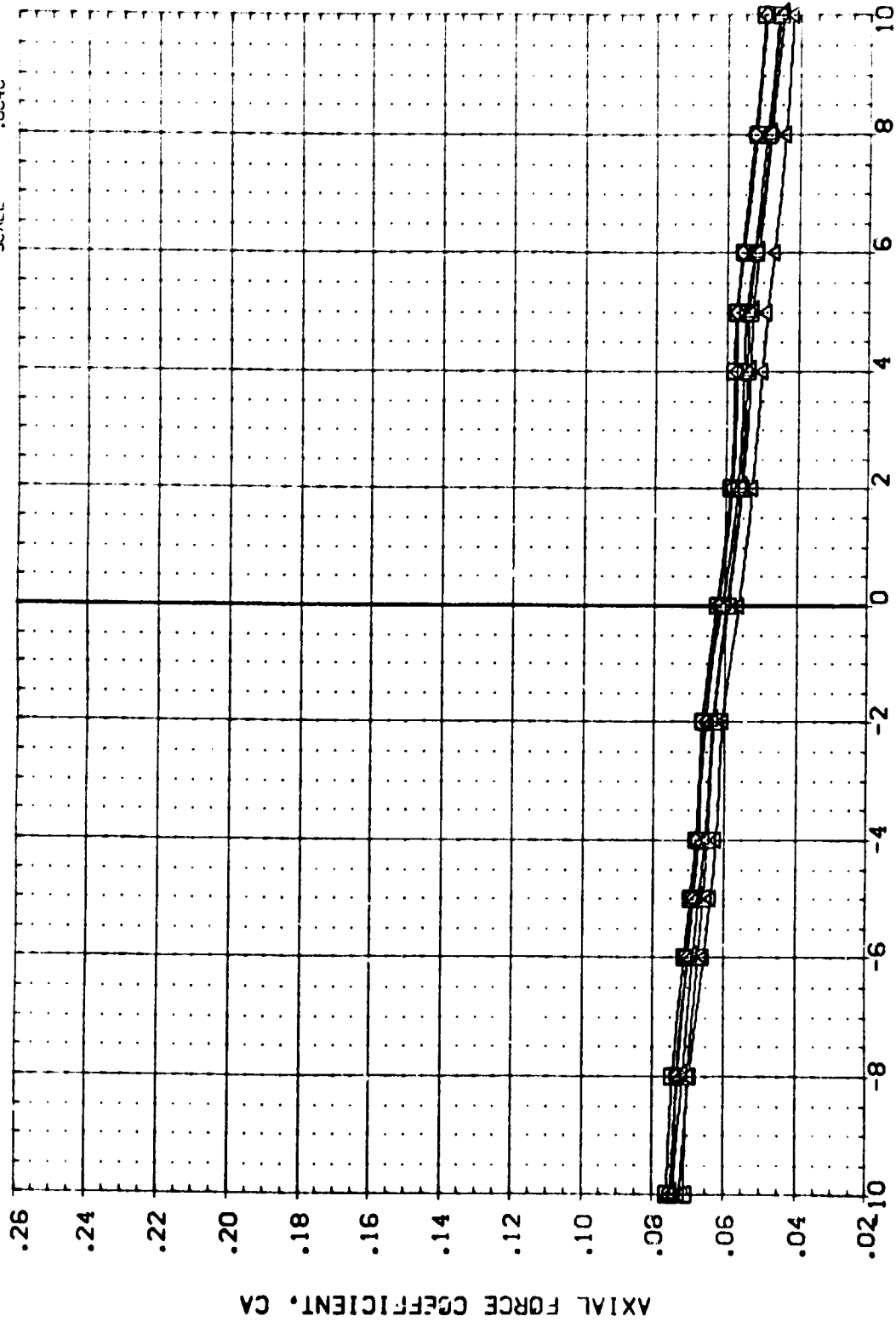
BREF 5.3130 IN

XMRP 2.5490 IN

YMRP .0000 IN

ZMRP .0000 IN

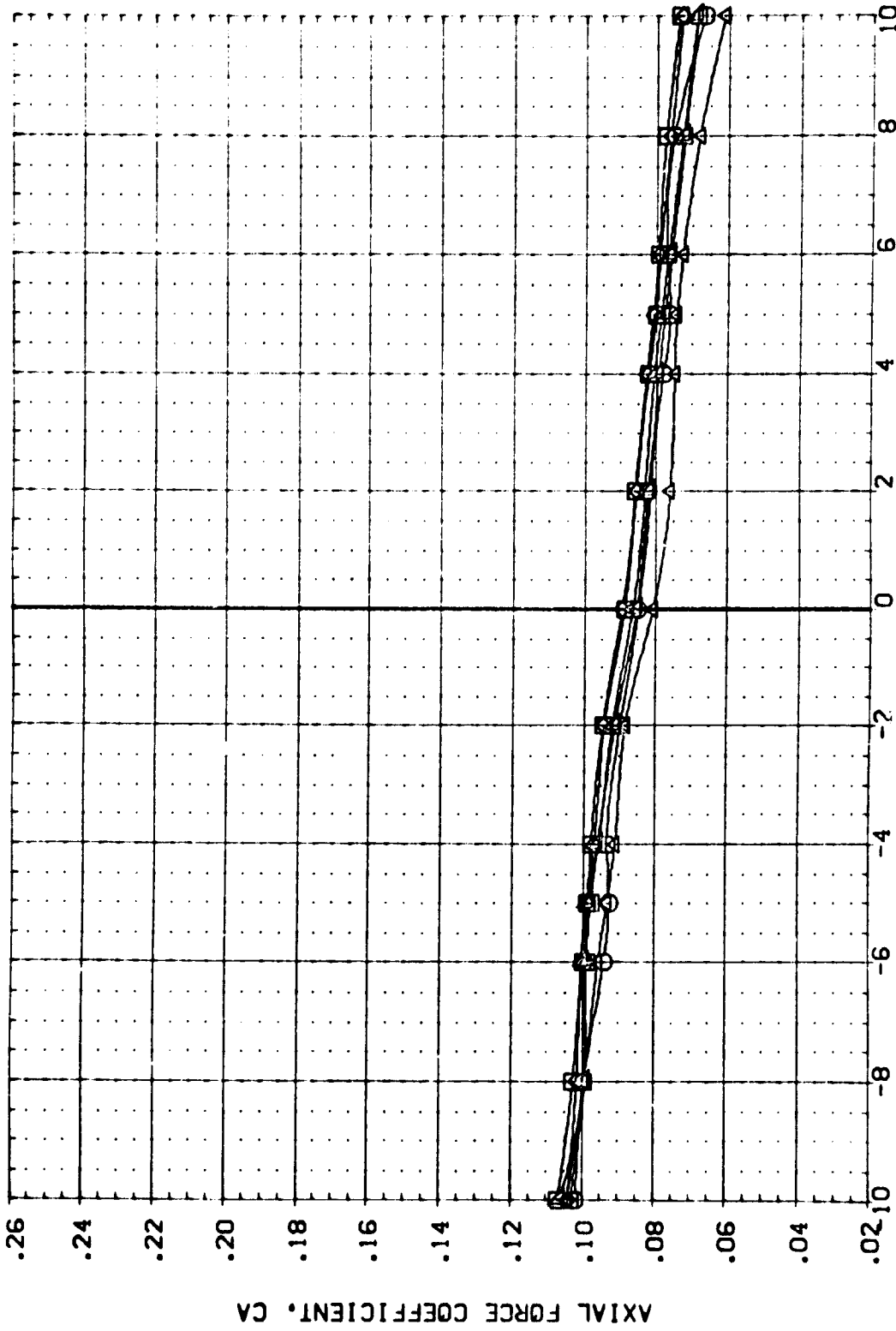
SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SC IN
(C83T02)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83T03)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83T04)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN
(C83T05)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83T06)	MSFC S70(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



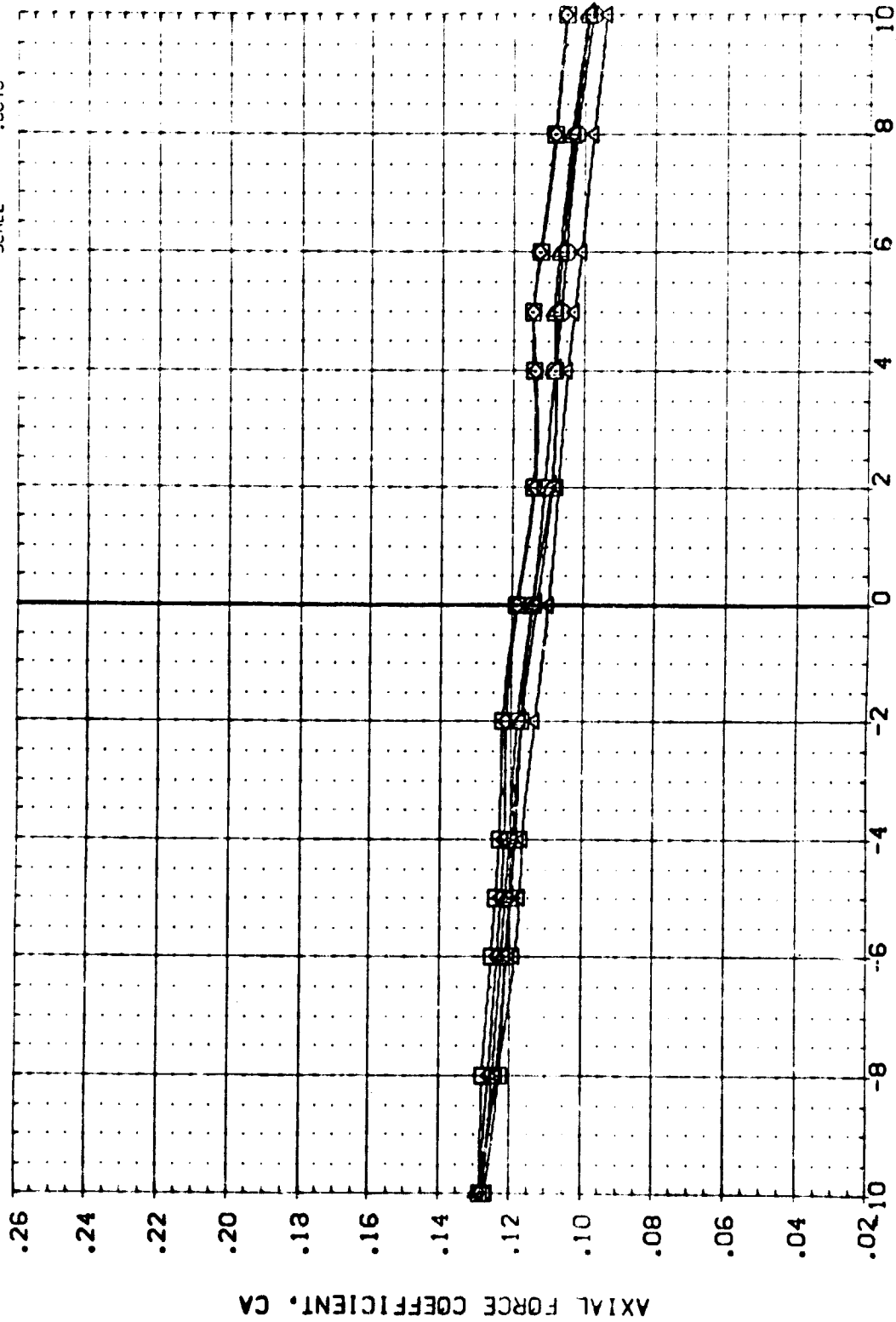
STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(O)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83T01) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))
 (C83T02) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))
 (C83T03) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))
 (C83T04) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))
 (C83T05) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))
 (C83T06) MSFC 570((A31F)(T9)/(S3/2)/(S3/2))

BETA ORBITAL DELTAZ
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .280
 .000 .500 .280
 .000 .500 .280

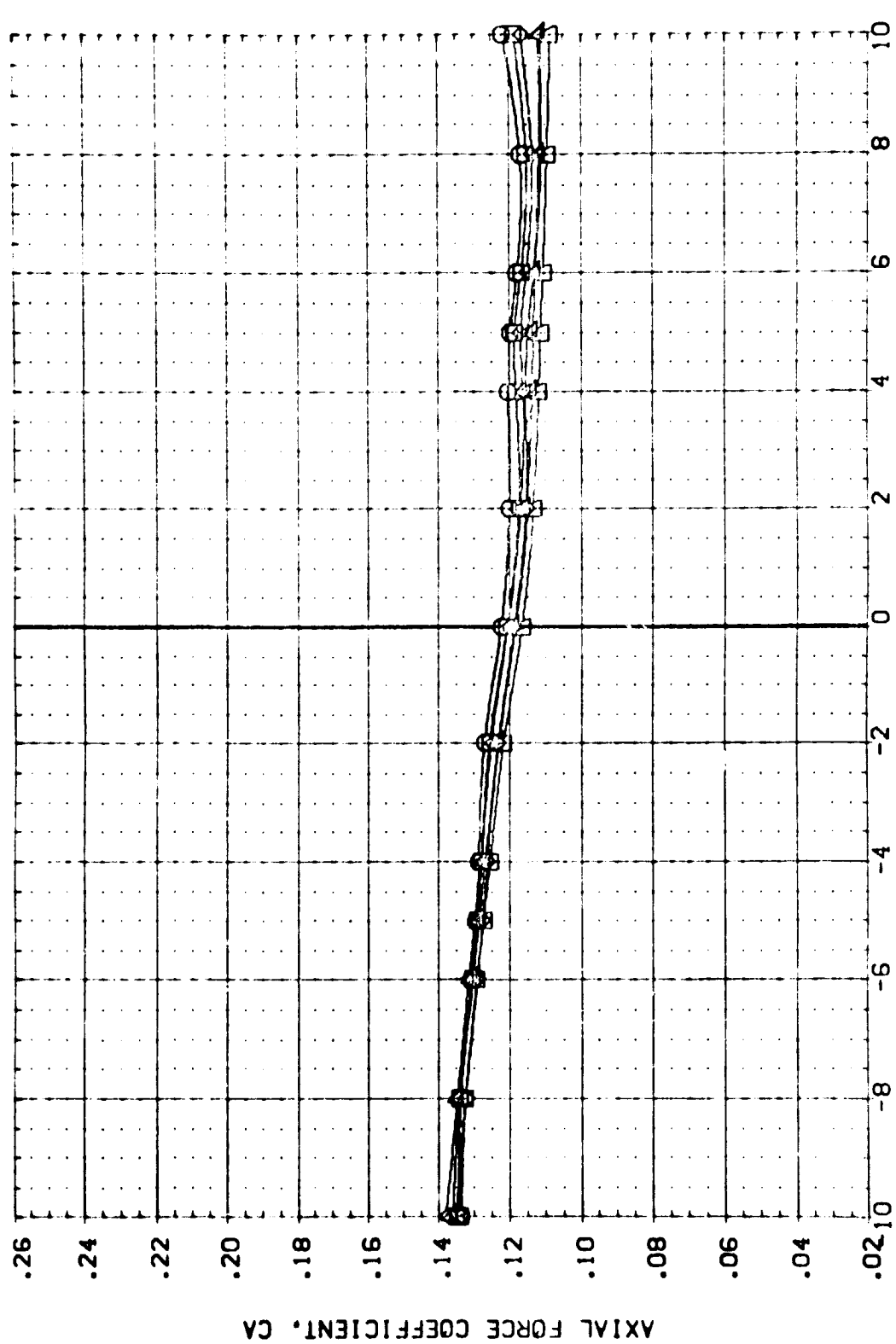
REFERENCE INFORMATION
 SREF 6.1980 SG. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SC: IN
(C83T02)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T03)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T04)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490
(C83T05)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T06)	MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



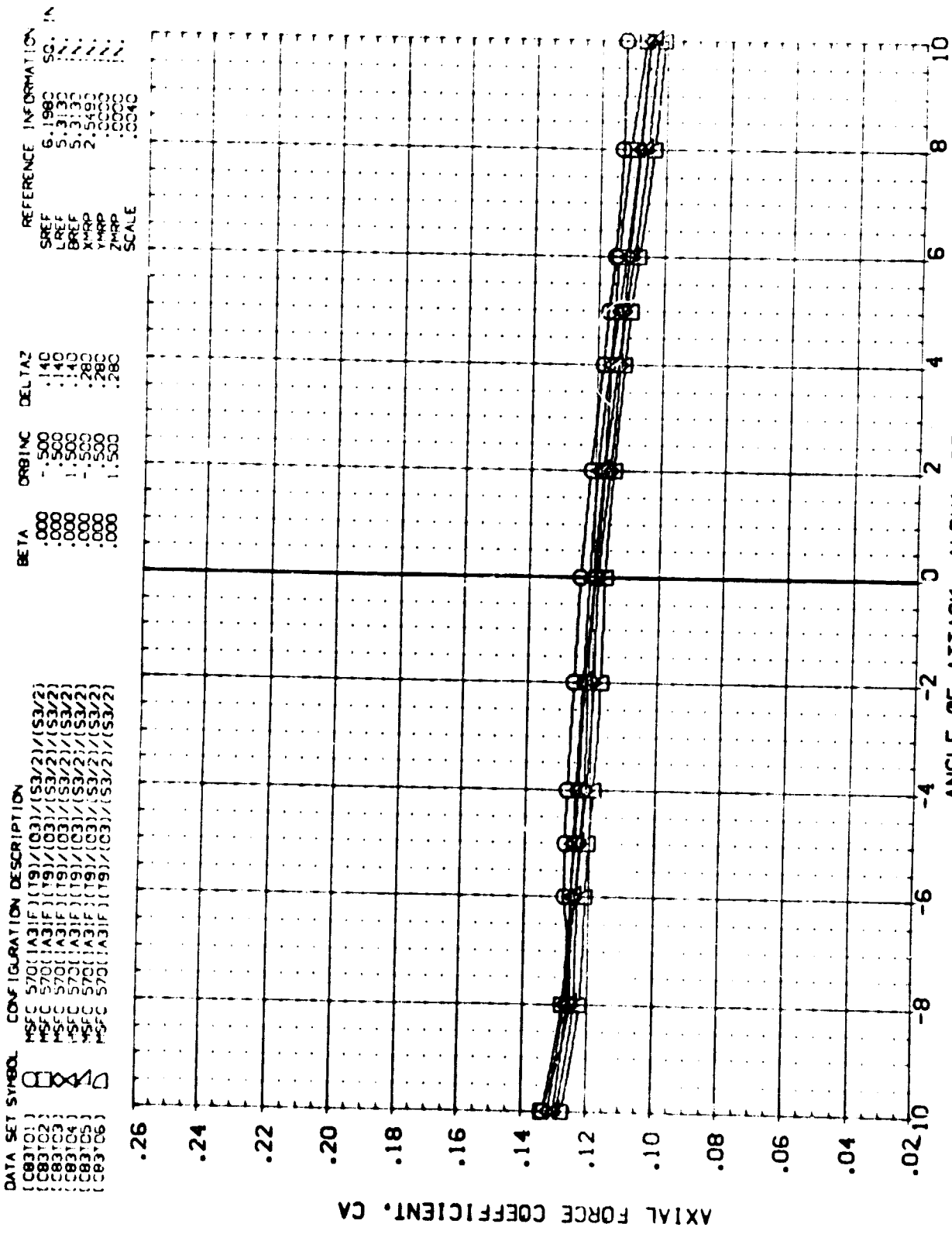
STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 1.46

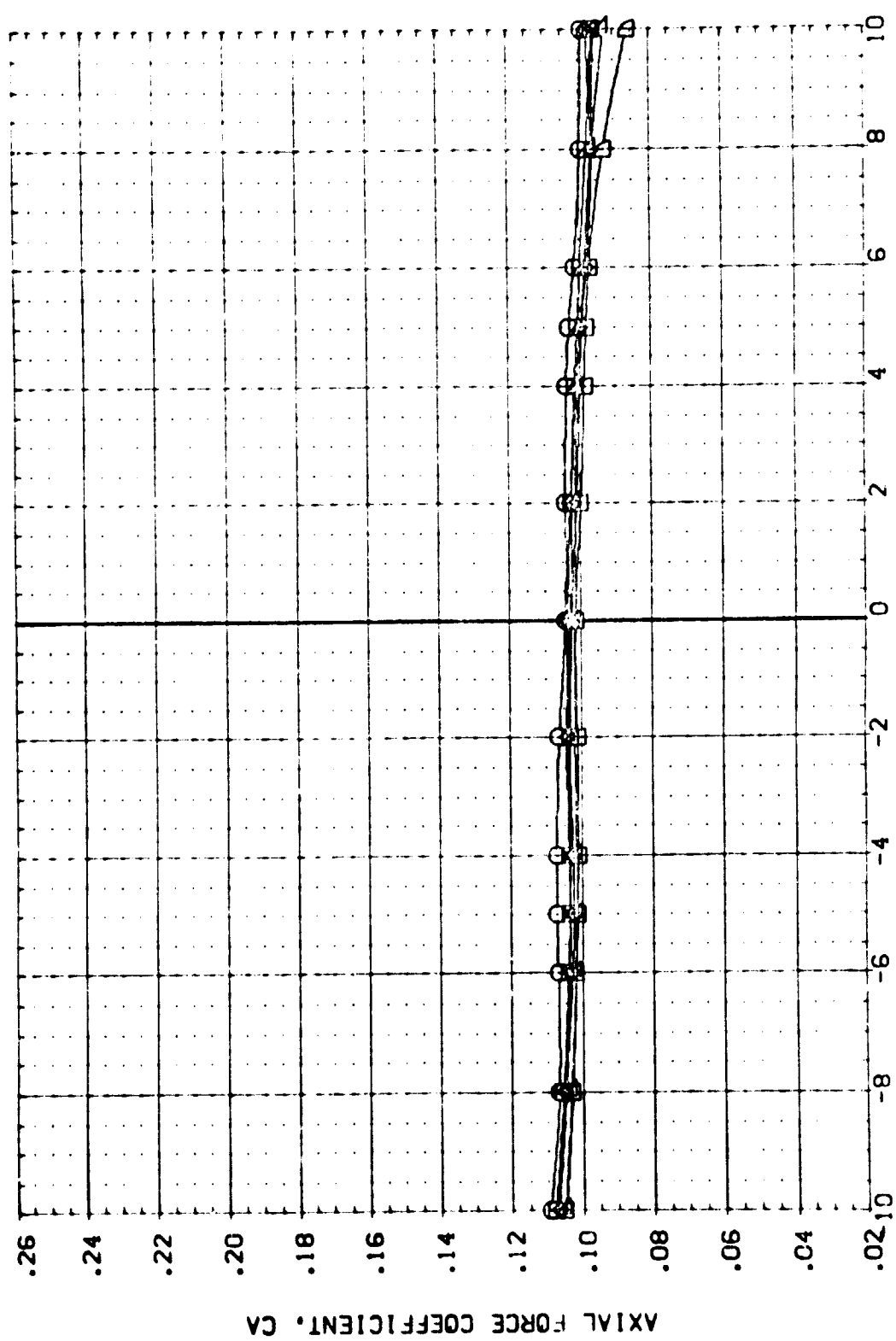


(G)MACH = 1.96

STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)



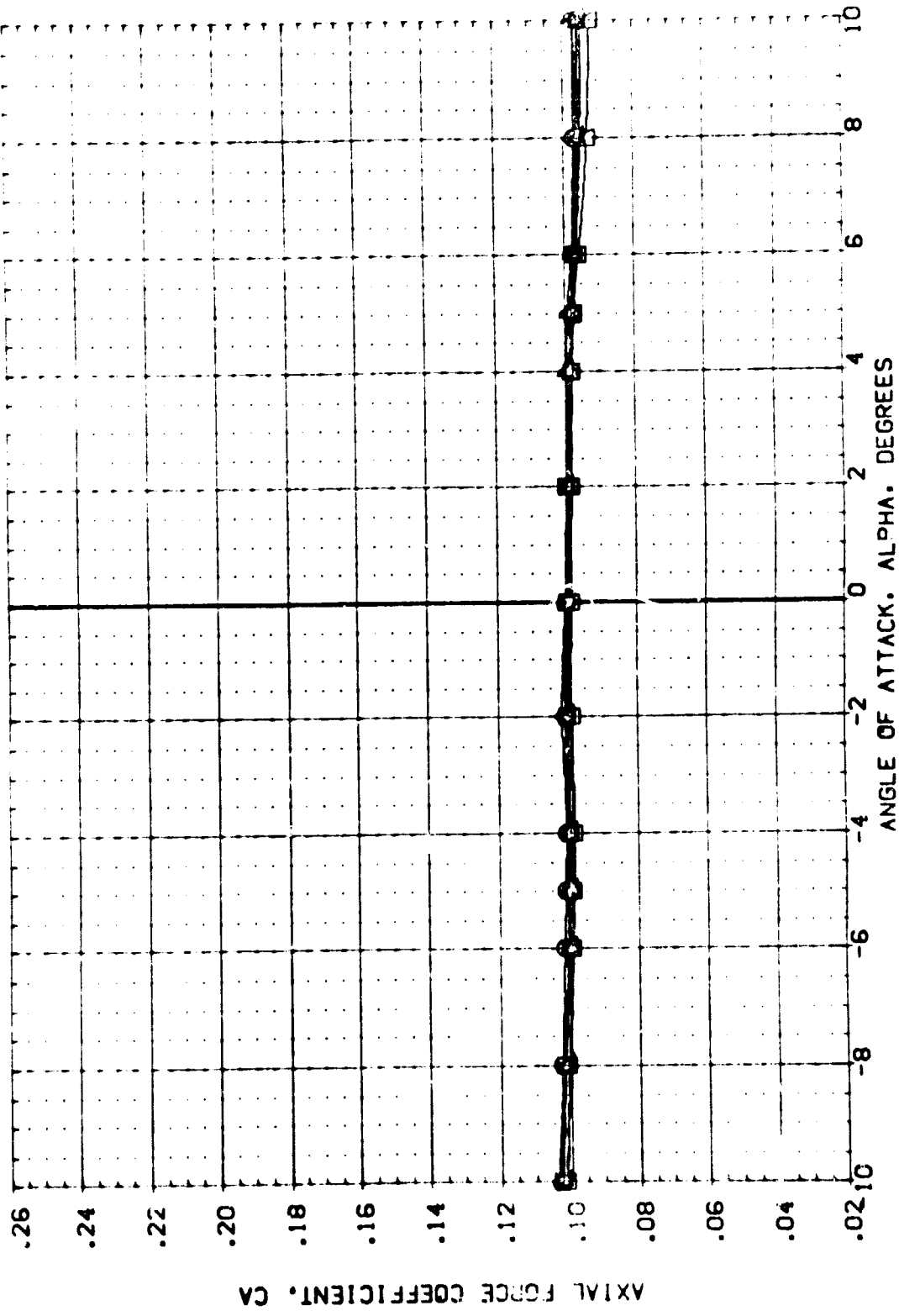
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
[C83T01]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
[C83T02]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
[C83T03]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
[C83T04]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490
[C83T05]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	ZMRP .0000
[C83T06]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(M)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CORR INC	DE TAZ	REFERENCE INFORMATION
(C03T01)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.1900
(C03T02)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C03T03)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.140	BREF 5.3130
(C03T04)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.280	XREF 2.5400
(C03T05)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.280	YREF .0000
(C03T06)	MSFC 570(A31F)(T9)/(C3)/(S3/2)/(S3/2)	.000	-.500	.280	ZREF .0000
					SCALE .0040

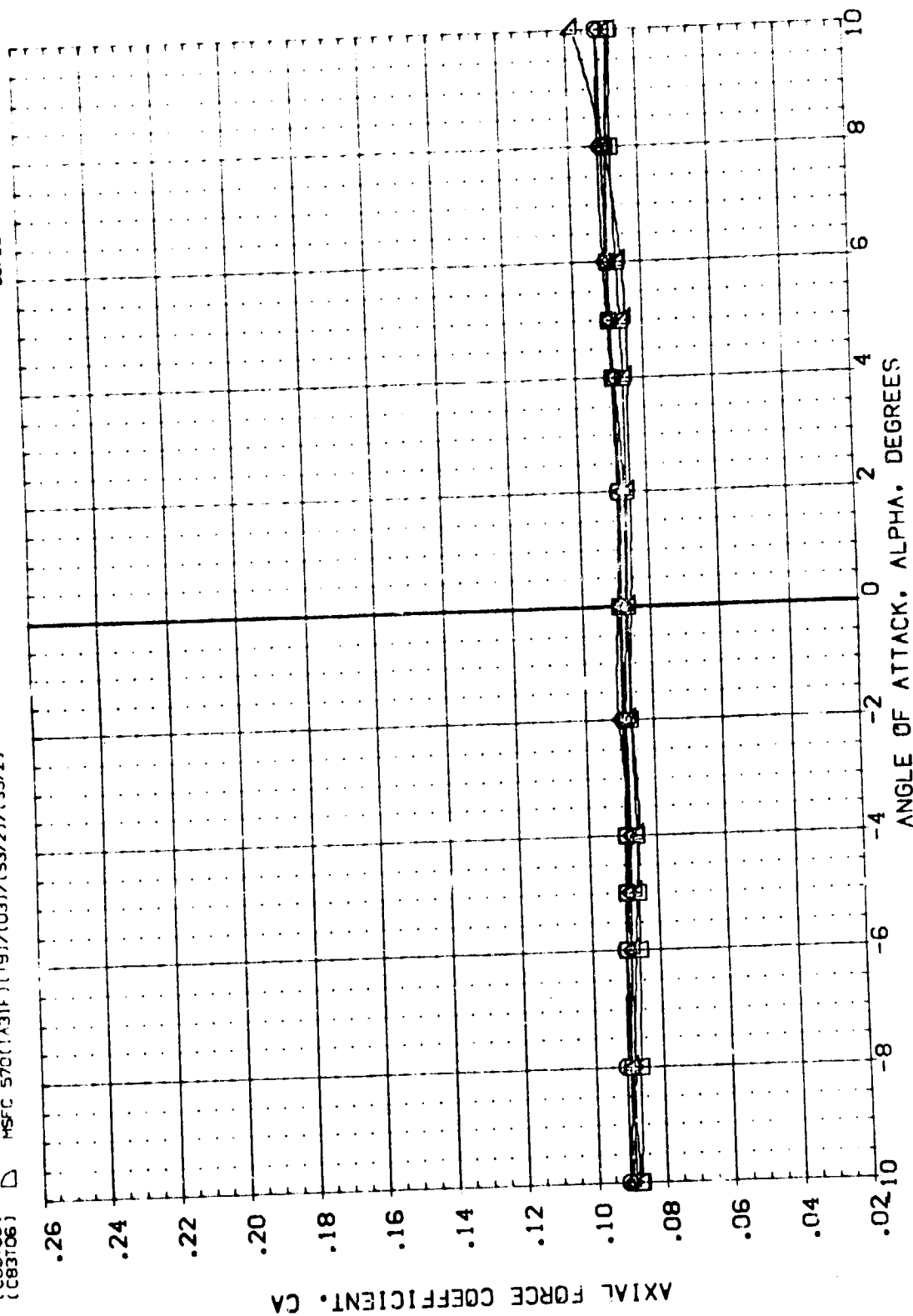


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (C3)/(S3/2)/(S3/2)

() MACH = 3.48



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SQ. IN
(C83101)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF	5.1980
(C83102)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF	5.3130
(C83103)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF	5.3130
(C83104)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP	2.5490
(C83105)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP	.0000
(C83106)	MSFC 570(I A31F)(T9)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(J)MACH = 4.96

REFERENCE INFORMATION

SREF 6.1980 SQ. IN

LREF 5.3130

BREF 5.3130

XMRP 2.5480

YMRP .0000

ZMRP .0000

SCALE .0040

BETA

ORBINC

DELTAZ

.000

-.500

.140

.000

.140

.000

.140

.000

.280

.000

.280

.000

.280

.000

.280

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

(C83T01)

(C83T02)

(C83T03)

(C83T04)

(C83T05)

(C83T06)

MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

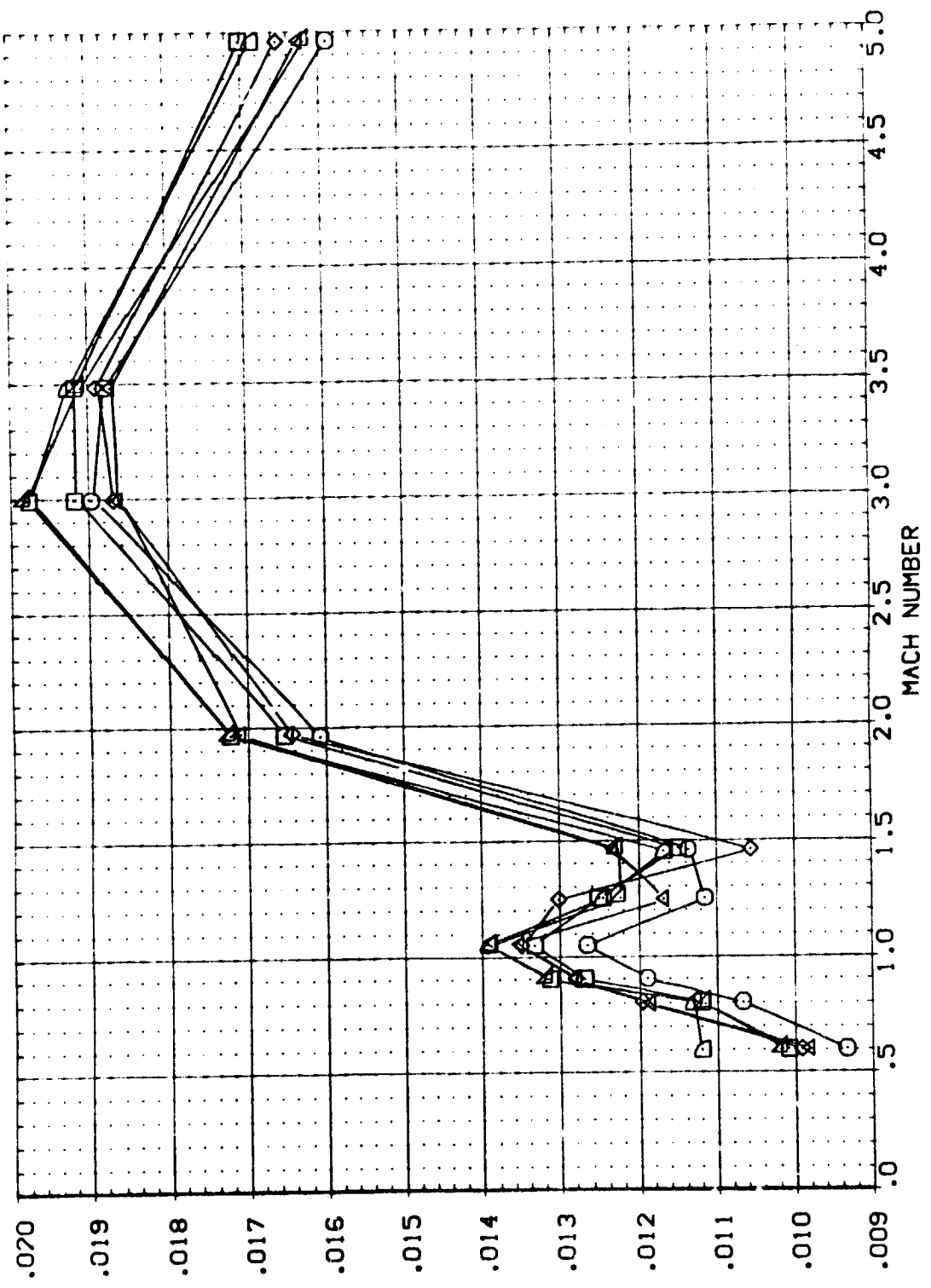
MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

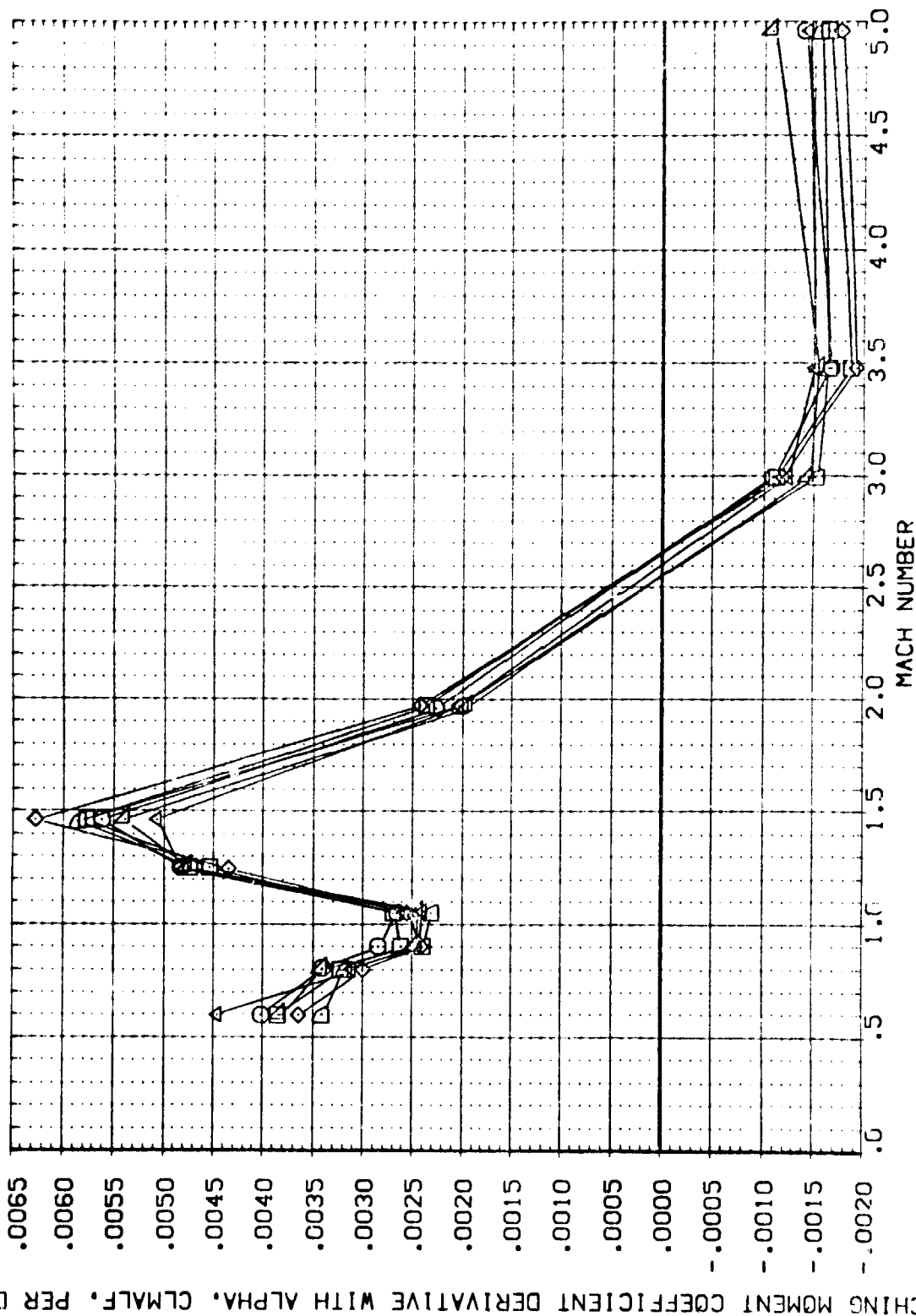
MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

MSFC 570(A31F)(T9)/(S3/2)/(S3/2)

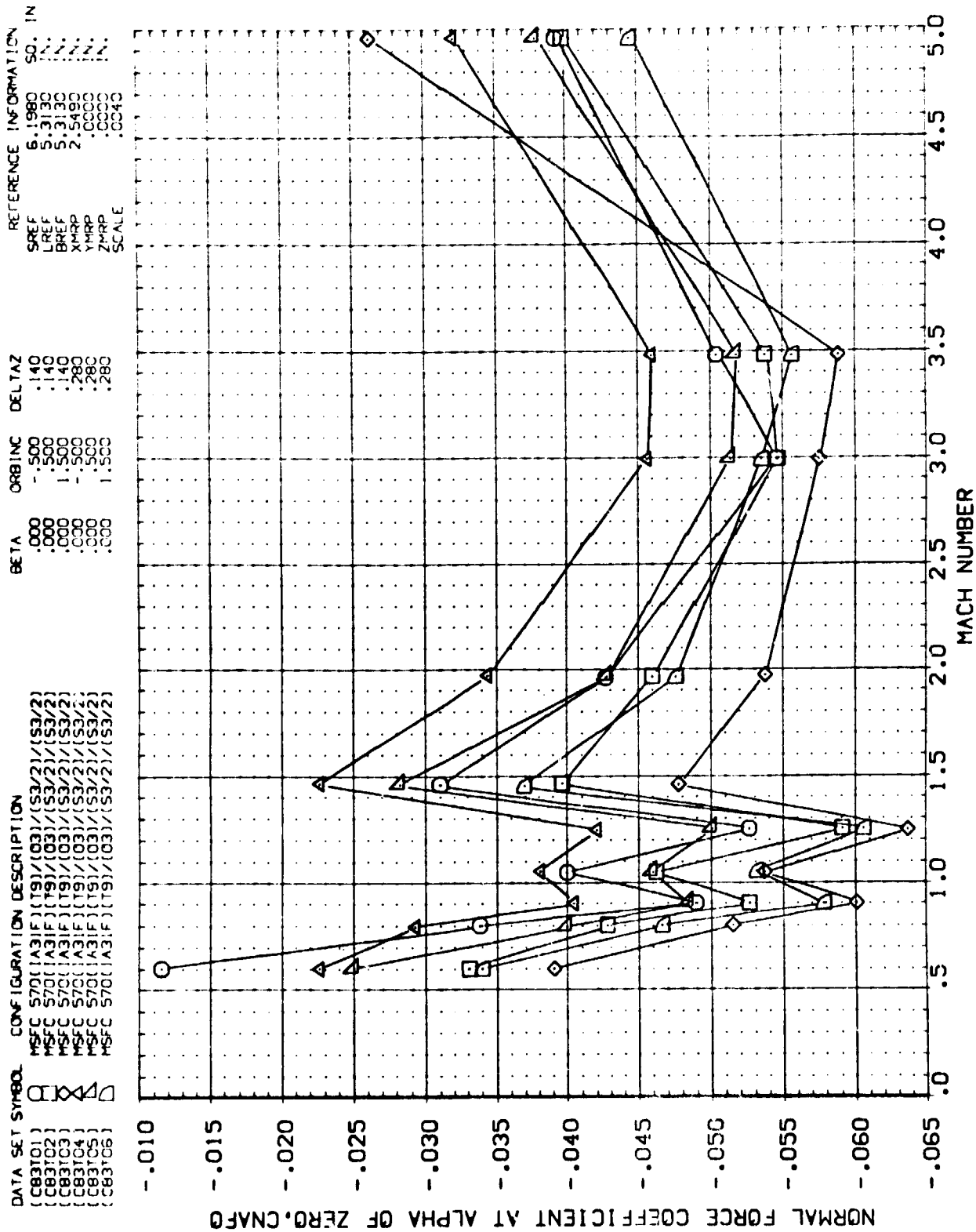


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

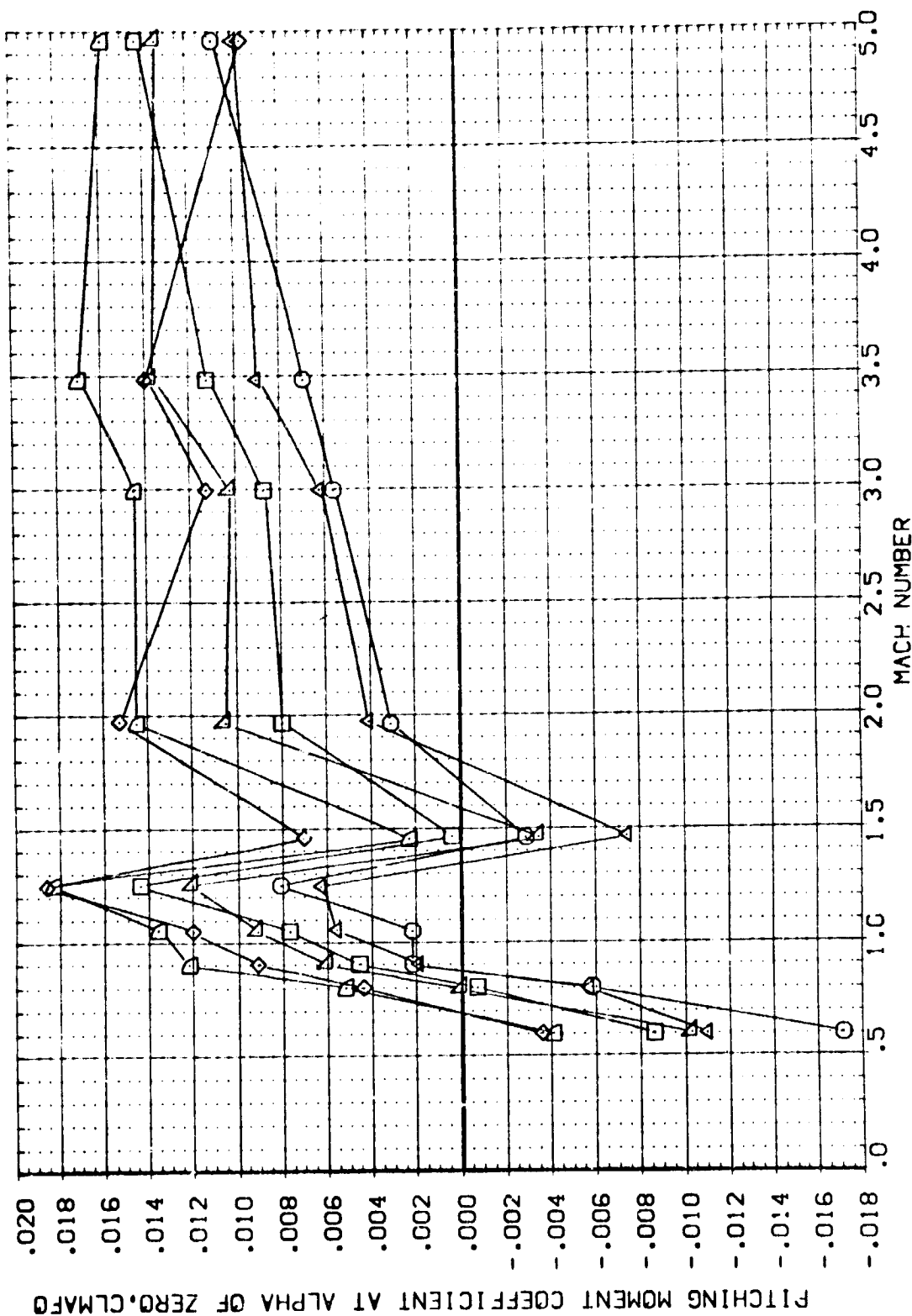
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
{C83T01}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
{C83T02}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
{C83T03}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
{C83T04}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP 2.5490
{C83T05}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
{C83T06}	MSFC 5701(A31F)(T9)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

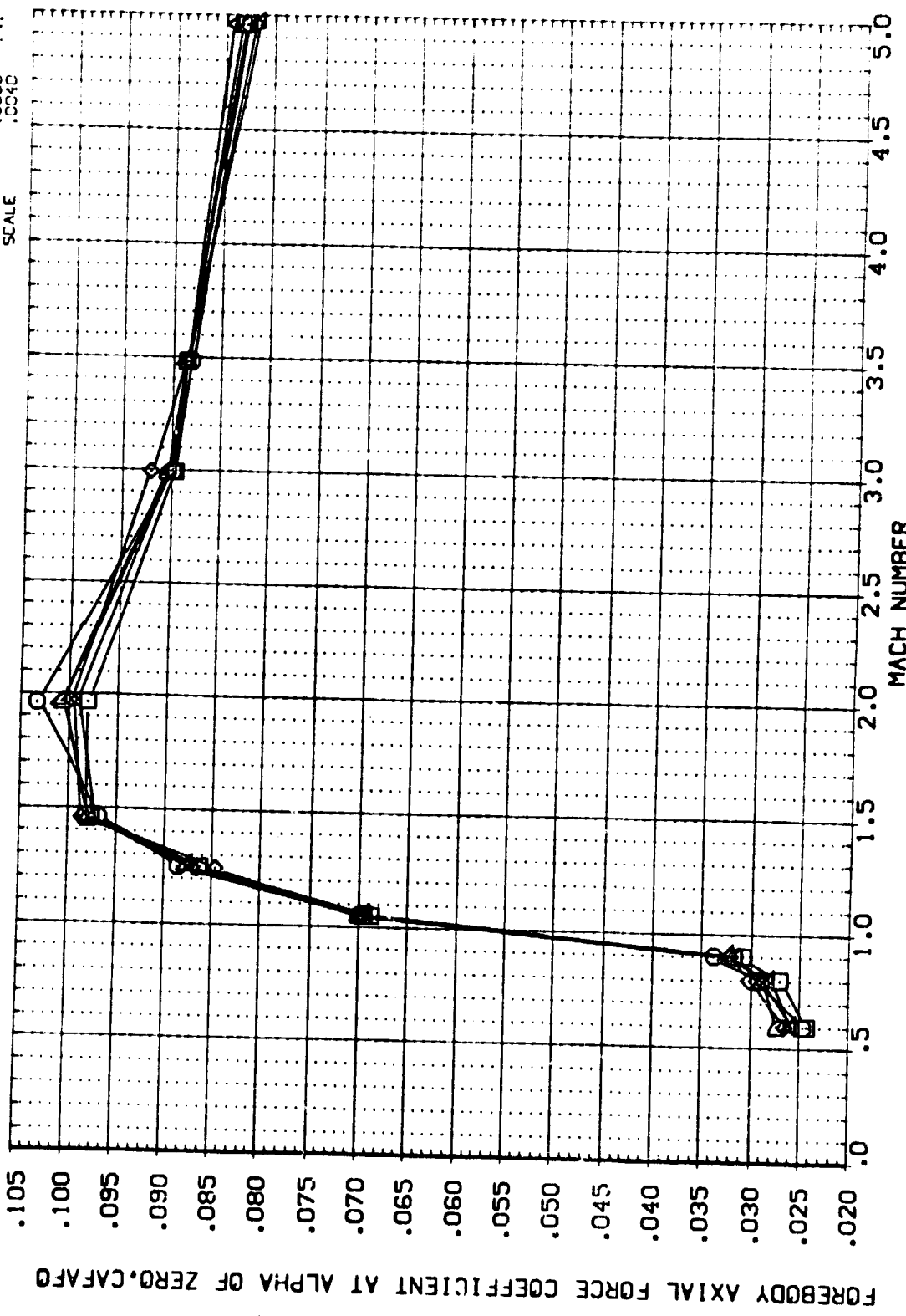


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO: IN
(C83T01)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	-.500	.140	SREF	6.1980
(C83T02)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.140	LREF	5.3130
(C83T03)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	1.500	.140	BREF	5.3130
(C83T04)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	-.500	.280	XMRP	5.5490
(C83T05)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	.500	.280	YMRP	.0000
(C83T06)	MSC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)	.000	1.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03) / (S3/2) / (S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T01)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF C.1980 SC.1
(C83T02)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF S.3130 SC.2
(C83T03)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF S.3130 SC.3
(C83T04)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP Z.5450 SC.4
(C83T05)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 SC.5
(C83T06)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0040 SC.6



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBINC DELTAZ REFERENCE INFORMATION

(C83T01) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .140 SREF 6.1980 SQ. IN

(C83T02) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .140 LREF 5.3130 N.

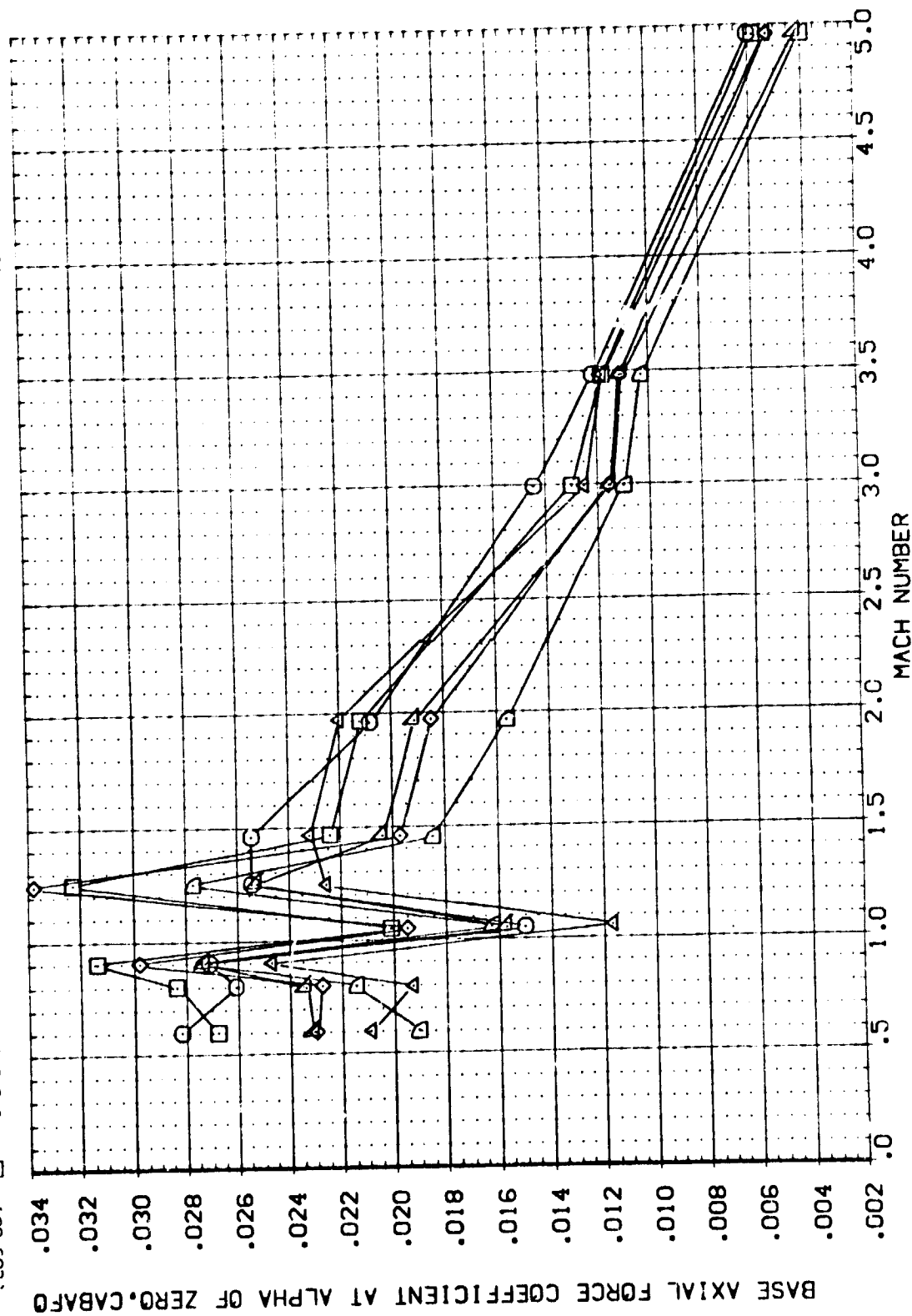
(C83T03) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .140 BREF 5.3130 N.

(C83T04) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .280 XMRP 2.5490 N.

(C83T05) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .280 YMRP .0000 N.

(C83T06) MSFC 570(A31F)(T9)/(03)/(S3/2)/(S3/2) .000 -.500 .280 ZMRP .0000 N.

SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

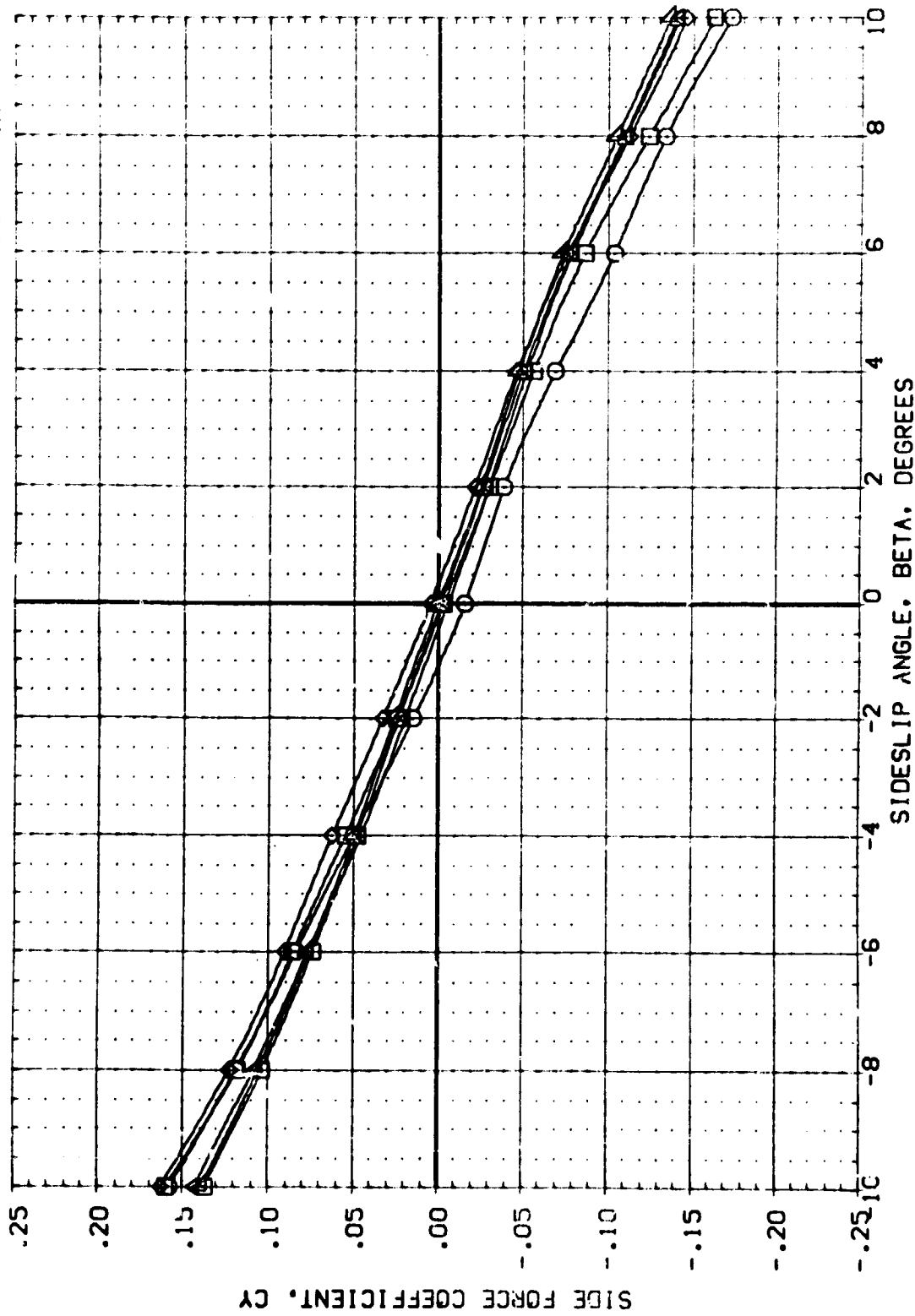
[A83T08]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])
[A83T09]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])
[A83T10]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])
[A83T11]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])
[A83T12]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])
[A83T13]	MSFC 570([A31F])(T9)/([O3])/([S3/2])/([S3/2])

ALPHA ORBINC DELTAZ

5.000	-.500	.140
5.000	.500	.140
5.000	1.500	.140
5.000	-.500	.280
5.000	.500	.280
5.000	1.500	.280

REFERENCE INFORMATION

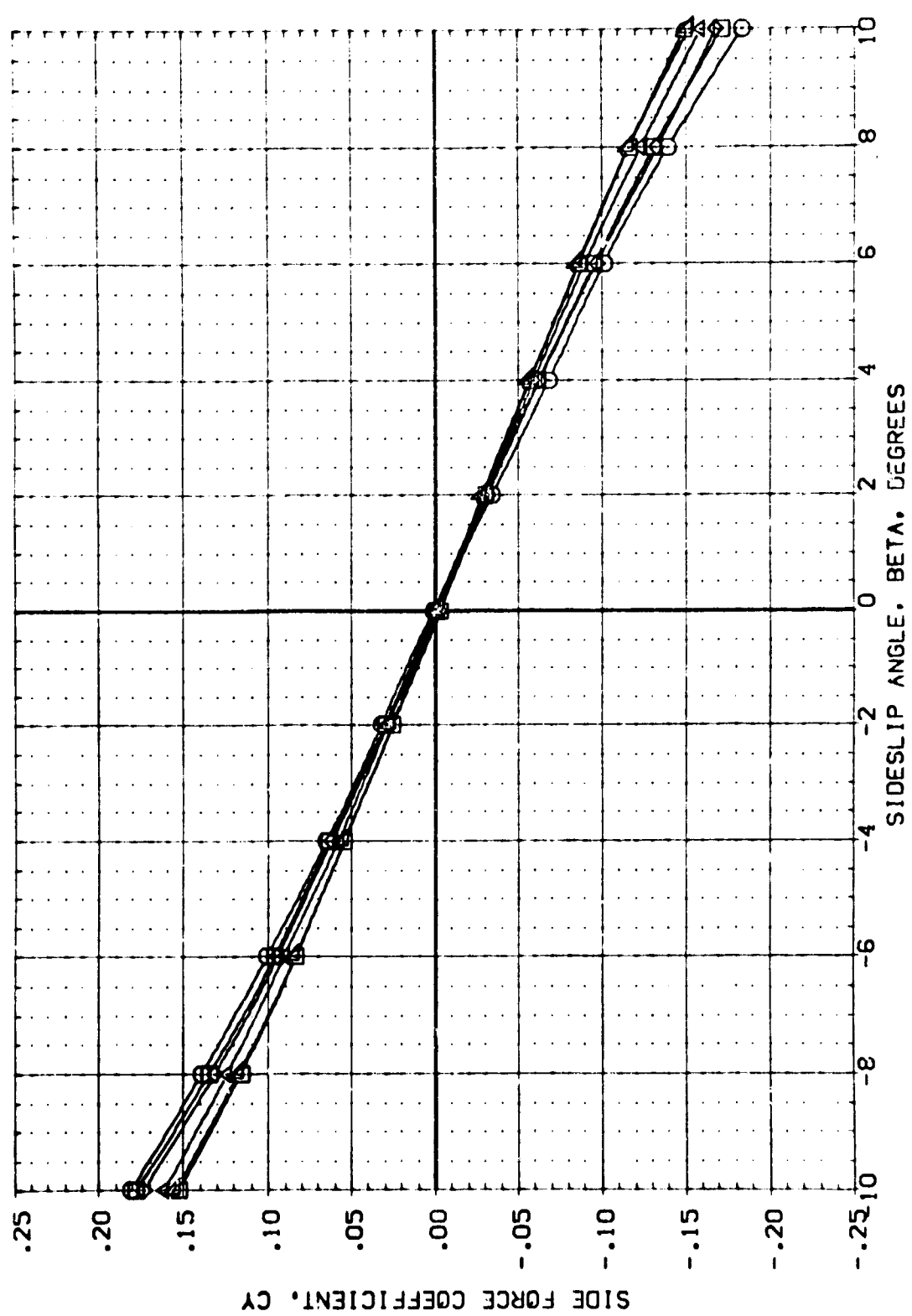
SREF	6.1580	SC	IN
LREF	5.3130		
BREF	5.3130		
XMSP	2.5480		
YMSP	.0000		
ZMSP	.0000		
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/([S3/2])/([S3/2])

(M)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T08)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.140	SREF 6.19PQ SQ. IN
(A83T09)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.140	LREF 5.3130 IN
(A83T10)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.140	BREF 5.3130 IN
(A83T11)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.280	XMRP 2.5490 IN
(A83T12)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.280	YMRP .0000 IN
(A83T13)	MSFC 570 (A31F) (T9) (O3) (S3/2) (S3/2)	5.000	-500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION

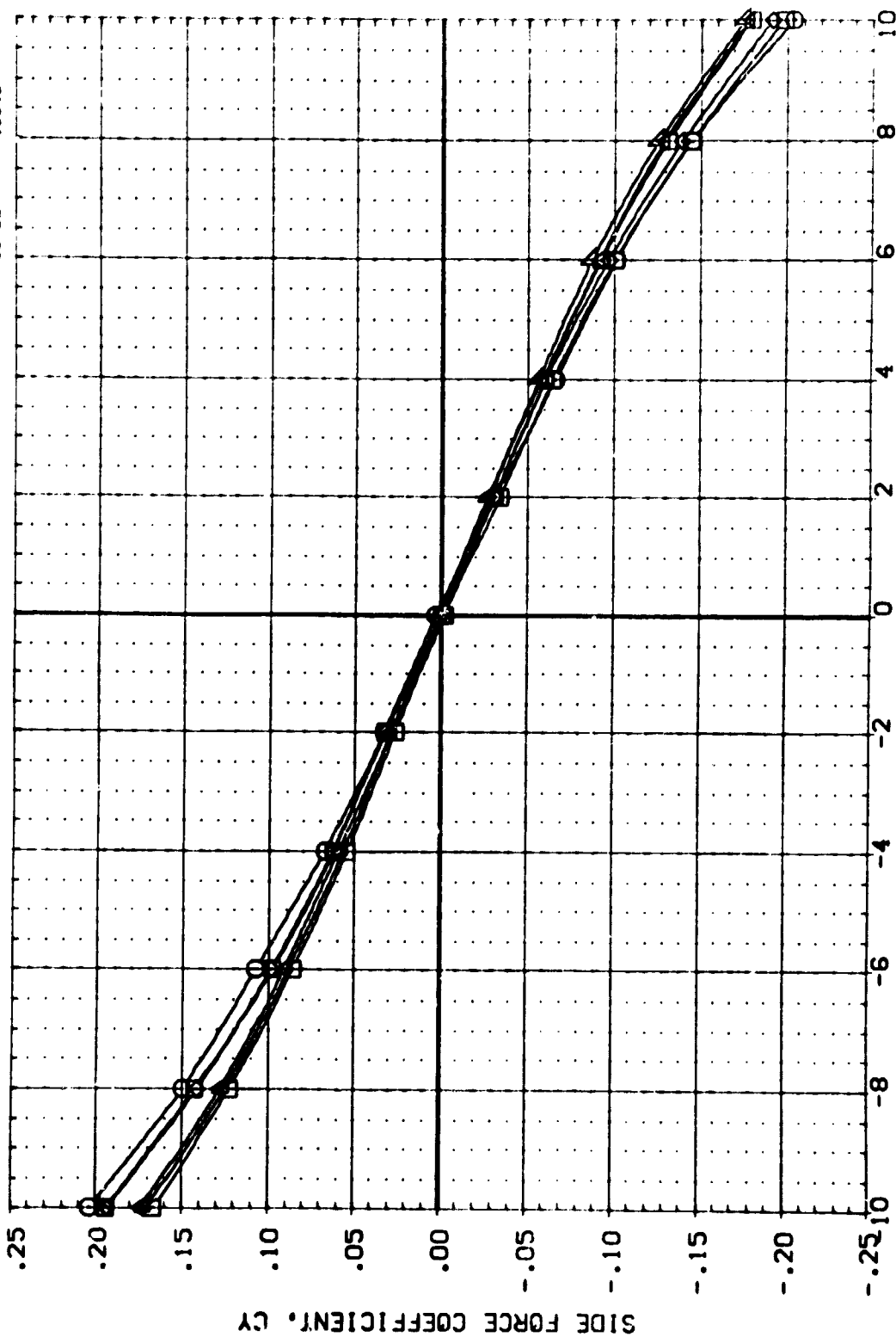
(A83T08)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))
(A83T09)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))
(A83T10)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))
(A83T11)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))
(A83T12)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))
(A83T13)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))

ALPHA ORBING DELTAZ

5.000	-500	.140
5.000	500	.140
5.000	1.500	.140
5.000	-1.500	.280
5.000	1.500	.280

REFERENCE INFORMATION

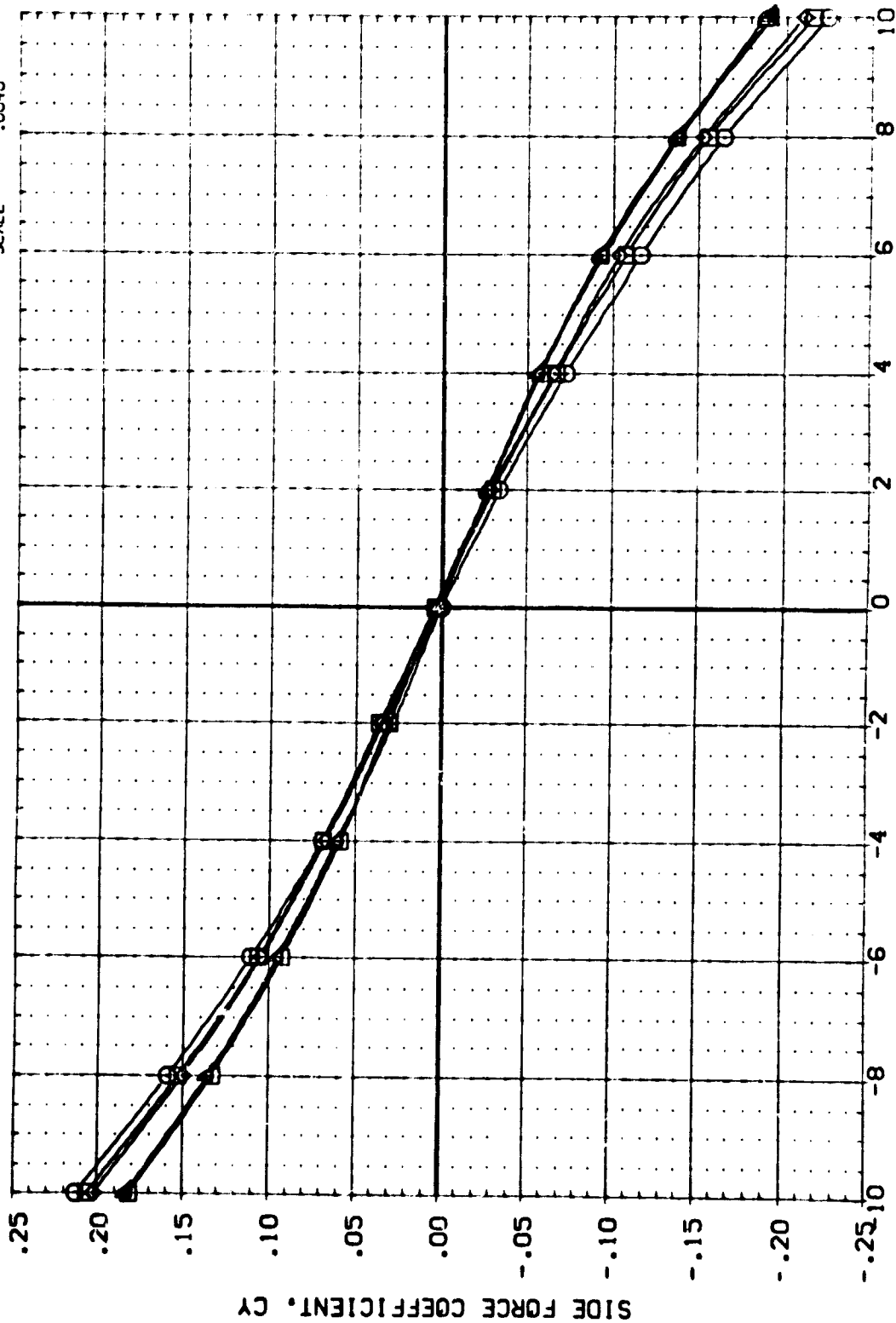
SREF	6.1980	50. IN
LREF	5.3130	IN
BREF	5.3130	IN
YMRP	2.5490	IN
ZMRP	.0000	IN
SCALE	.0040	



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.25

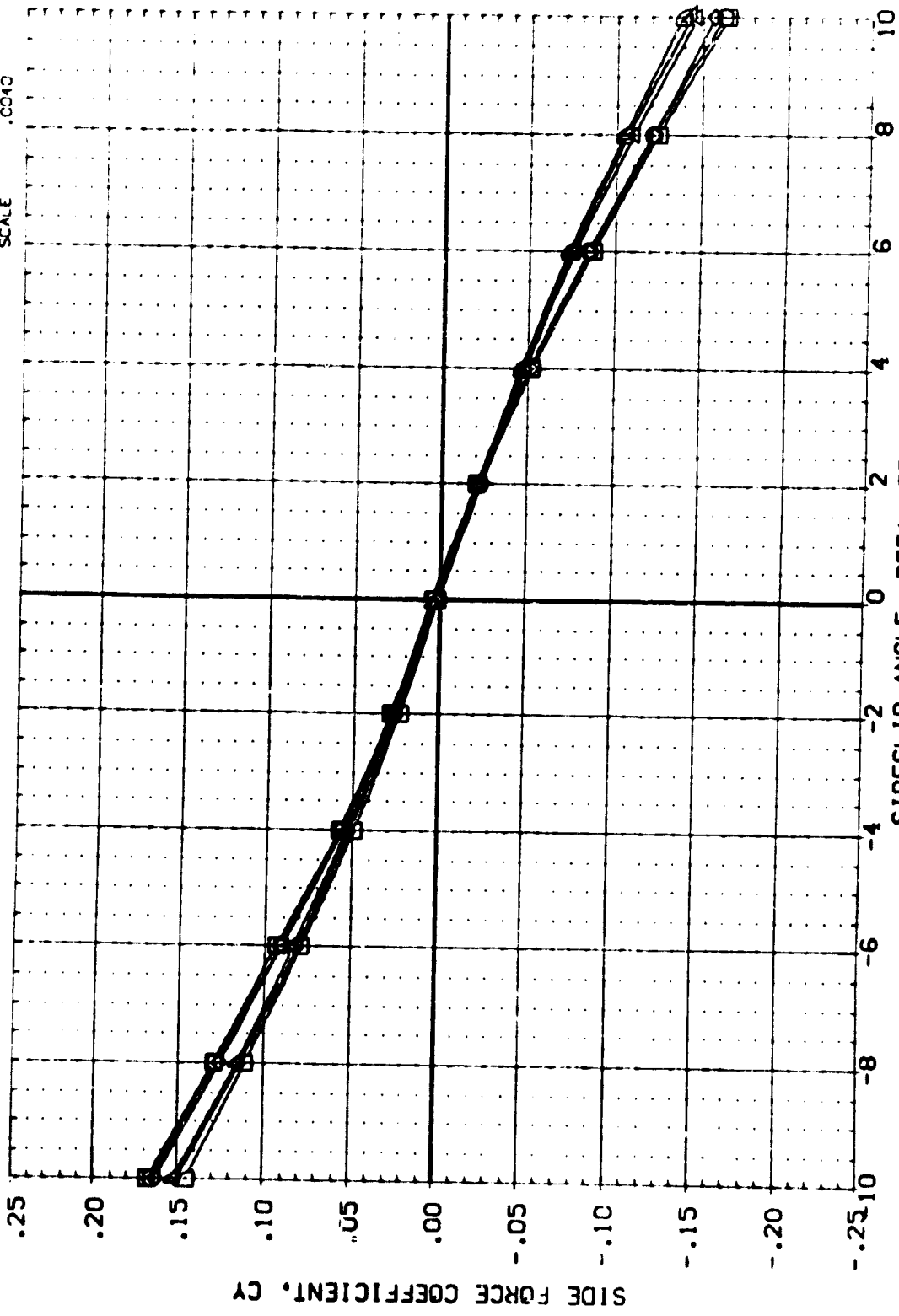
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T08)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-.500	.140	SREF 6.1980 SQ. IN
(A83T09)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(A83T10)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-.500	.140	BREF 5.3130 IN.
(A83T11)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-.500	.280	YMRP 2.5490 IN.
(A83T12)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-.500	.280	ZMRP .0000 IN.
(A83T13)	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(O)MACH = 1.46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[A83108]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 SG. IN
[A83109]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130
[A83110]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.140	BREF 5.3130
[A83111]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490
[A83112]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000
[A83113]	MSFC 5701(A31F)(T9)(O3)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP .0000
					SCALE .0040

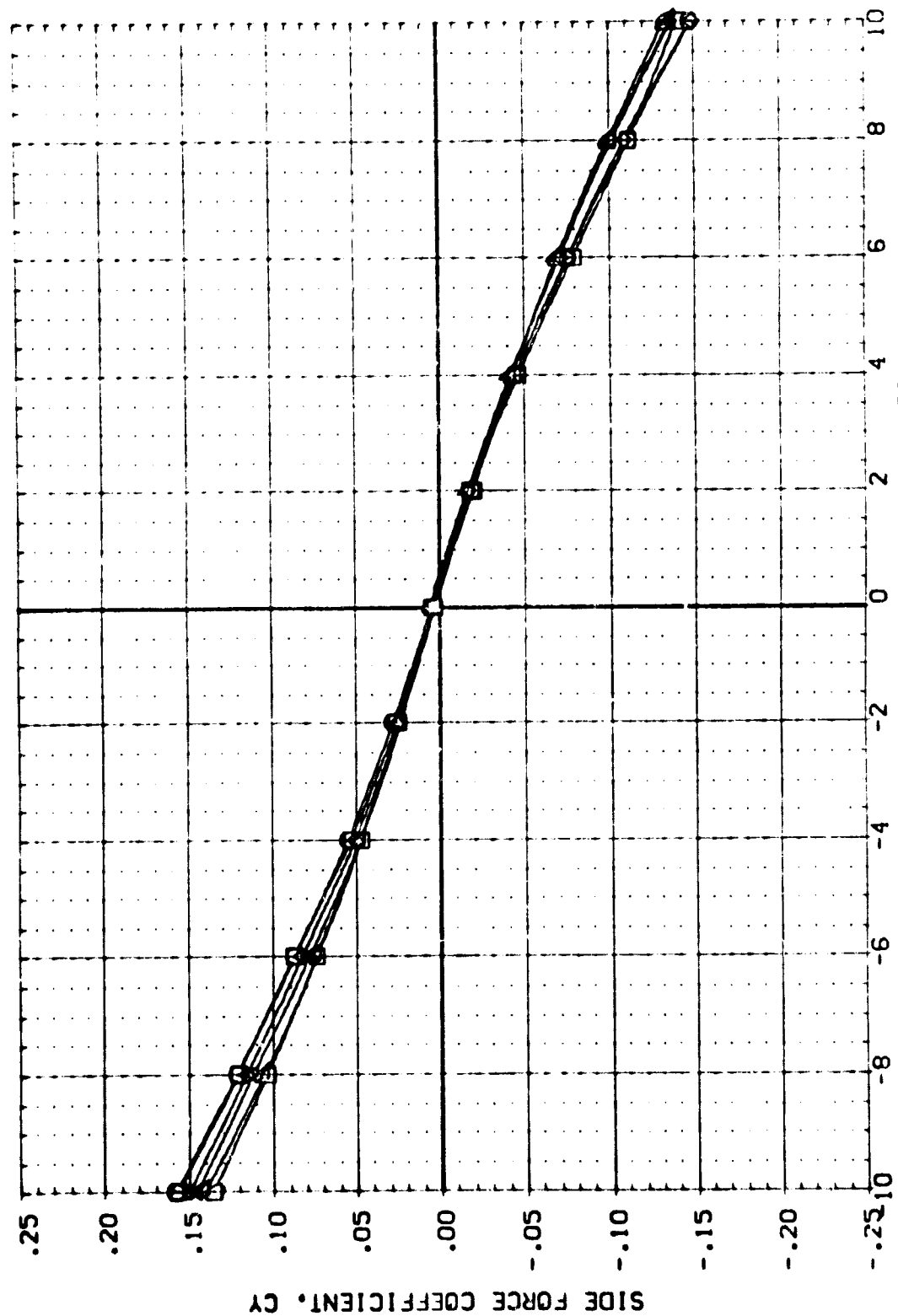


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(E)MACH = 2.99



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT	DELTA Z	REFERENCE INFORMATION
[A83108]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	-.500	.140	SREF 6.1980
[A83109]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	.500	.140	LREF 5.3130
[A83110]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	1.500	.140	BREF 5.3130
[A83111]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	-.500	.260	XMRP 2.5450
[A83112]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	1.500	.260	YMRP .0000
[A83113]	□	MSFC 5701(A31F)(T9)/(03)/(S3/2)	5.000	1.500	.260	ZMRP .0000
						SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

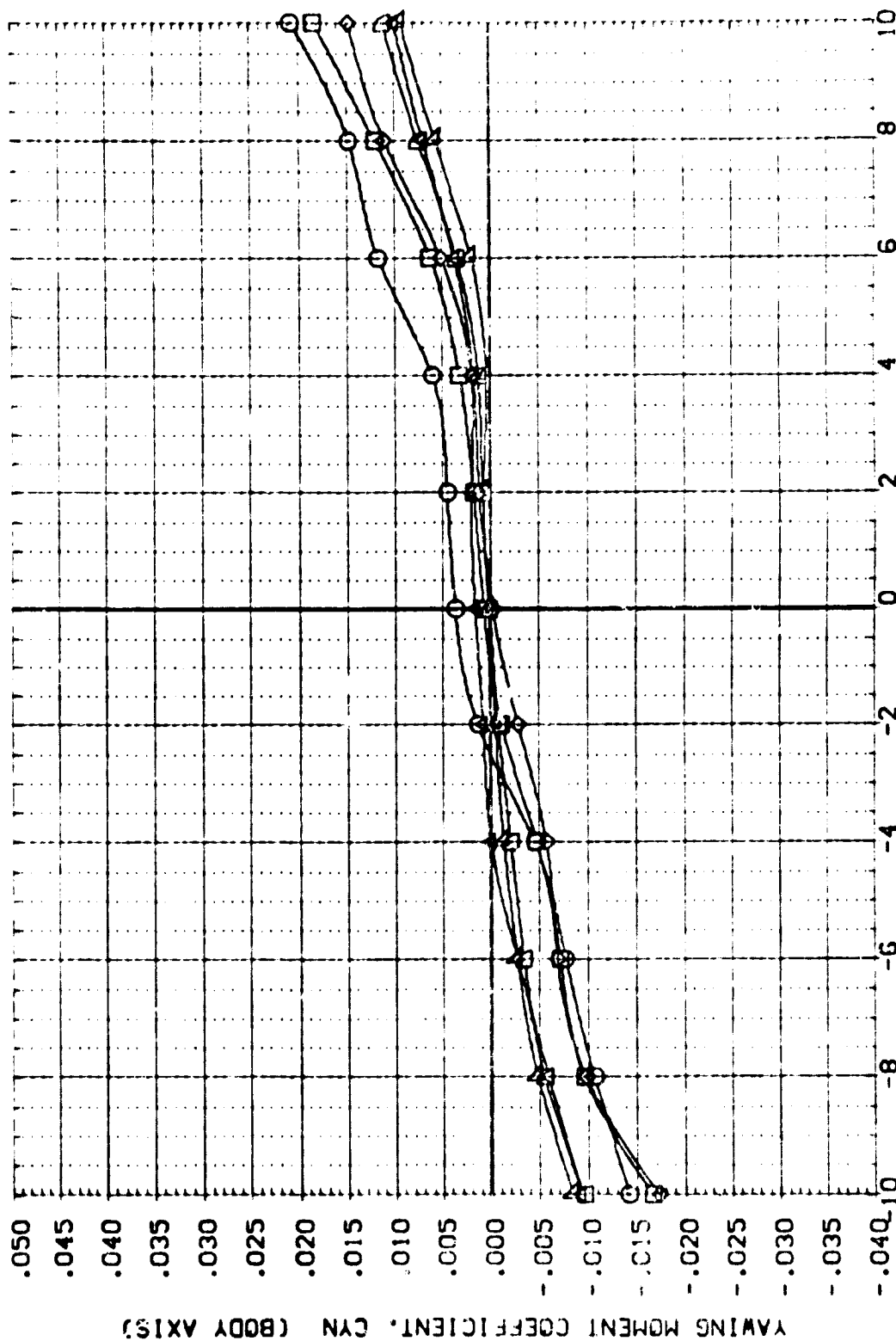
(F)MACH = 3.48

DATA SET SYMBOL

(A83108) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
 (A83109) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
 (A83110) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
 (A83111) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
 (A83112) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)
 (A83113) MSFC 5701(A31F)(T9)(03)/(S3/2)/(S3/2)

ALPHA 5.000
 ORBINC -500
 DELTAZ .140
 SREF 5.3130
 LREF 5.3130
 BREF 5.3130
 XPROP 2.5480
 YPROP .0000
 ZPROP .0000
 SCAL .0010

REFERENCE INFORMATION
 6.1980 SQ. IN
 5.3130
 2.5480
 .0000
 .0000
 .0010

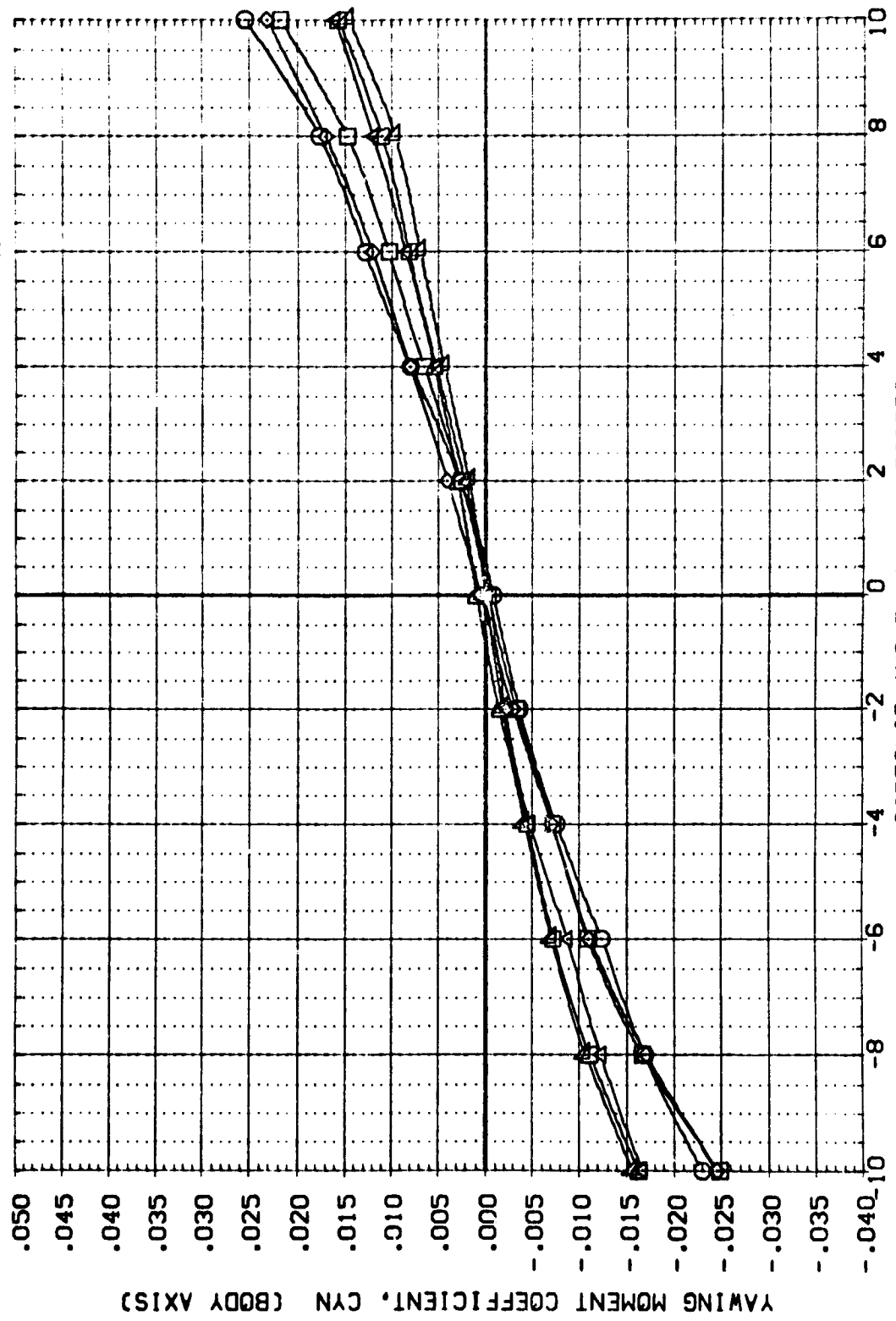


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A) MACH = .90

C-4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83108)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	- .500	.140	SREF 6.1980 SO. IN
(A83109)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	.500	.140	LREF 5.3130 IN.
(A83110)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83111)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	- .500	.280	XMRP 2.5490 IN.
(A83112)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	.500	.280	YMRP .0000 IN.
(A83113)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION

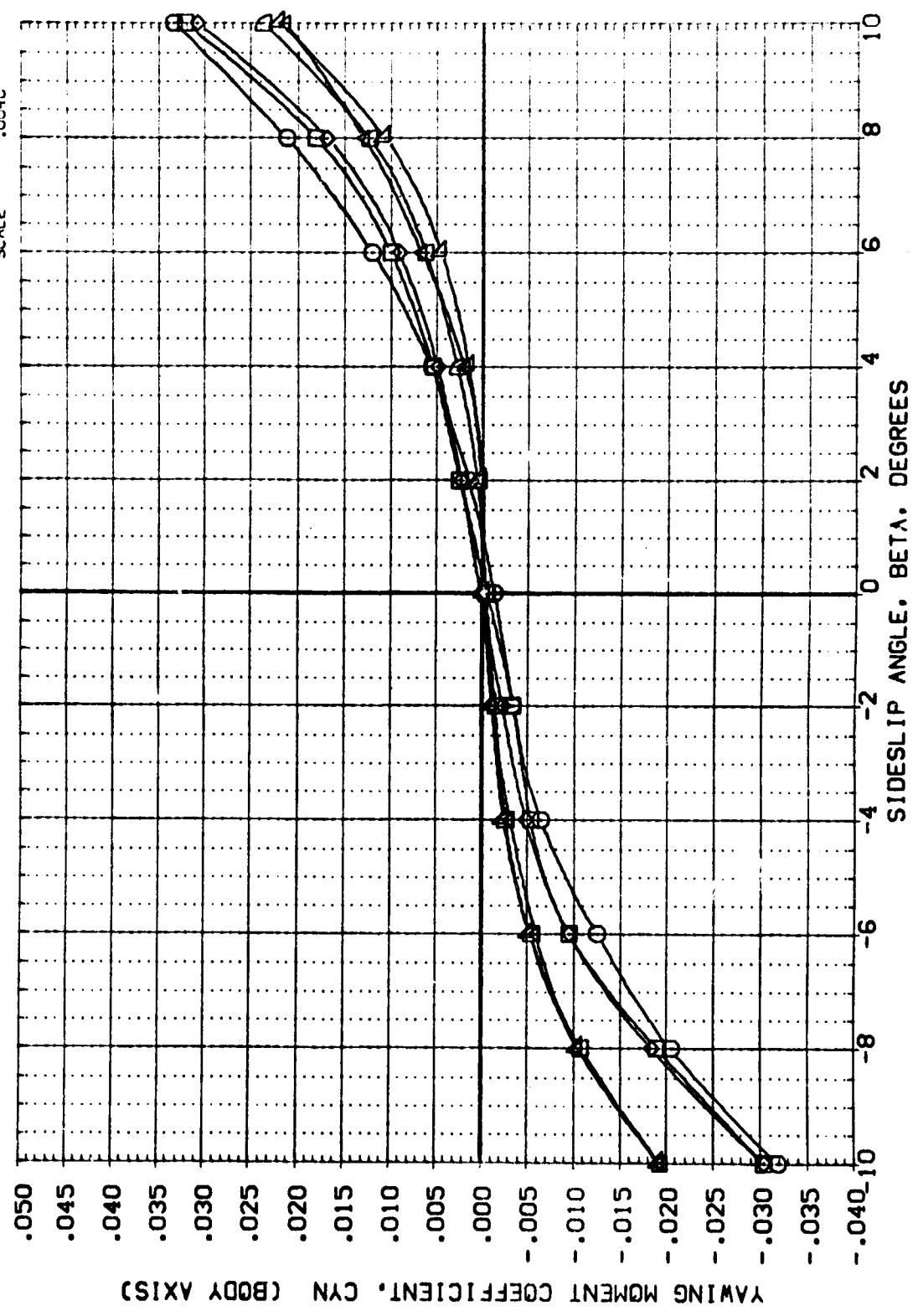
[AB3T08]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
[AB3T09]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
[AB3T10]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
[AB3T11]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
[AB3T12]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)
[AB3T13]	MSFC 570(IA3IF)(T9)/(S3/2)/(S3/2)

ALPHA DBB INC DELTA Z

5.000	-500	.140
5.000	-500	.140
5.000	-500	.280
5.000	-500	.280
5.000	-500	.280
5.000	-500	.280

REFERENCE INFORMATION

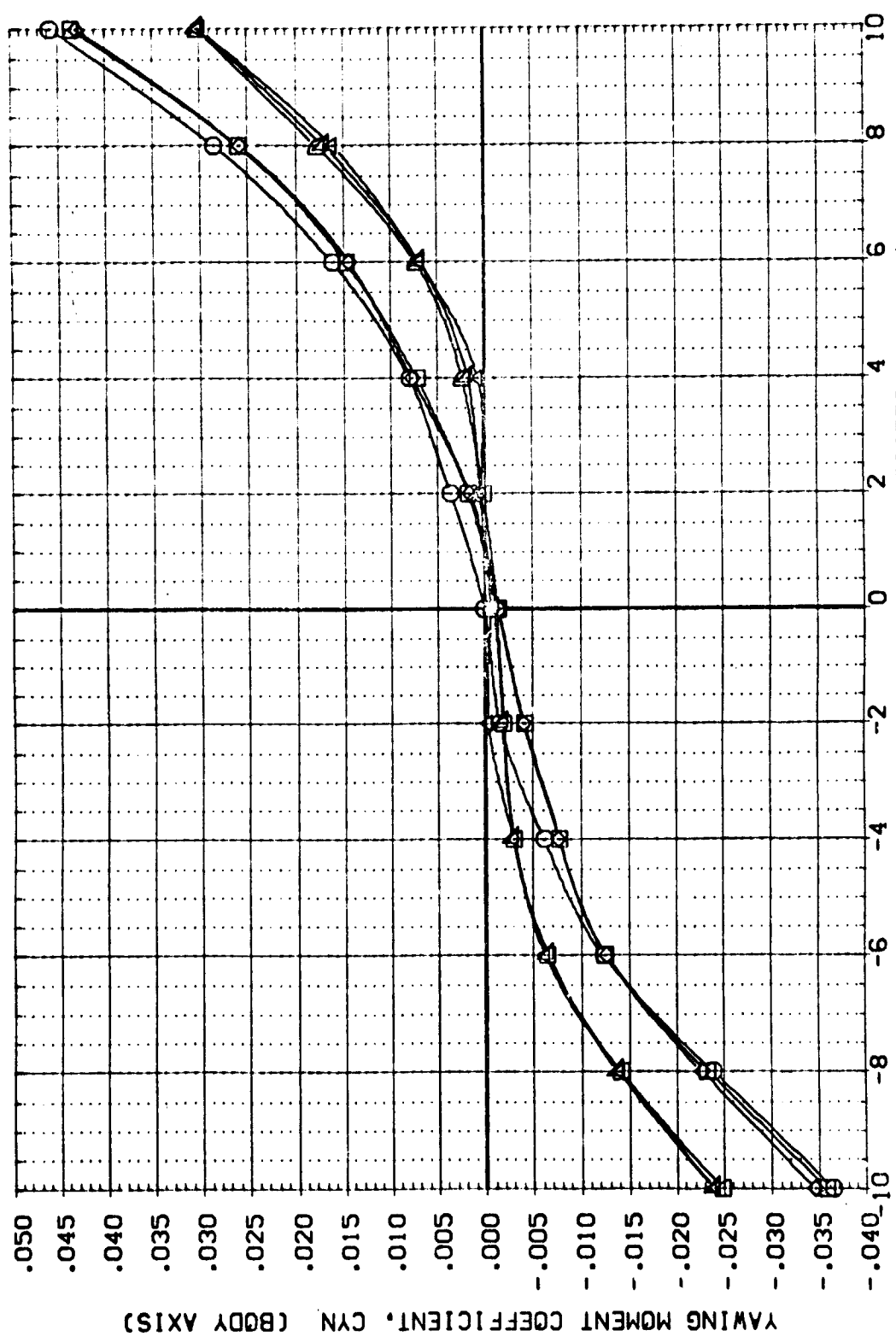
SREF	6.1980	SO	IN
LREF	5.3130	IN	IN
BREF	5.3130	IN	IN
YMRP	2.5490	IN	IN
ZMRP	.0000	IN	IN
SCALE	.0040		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.25

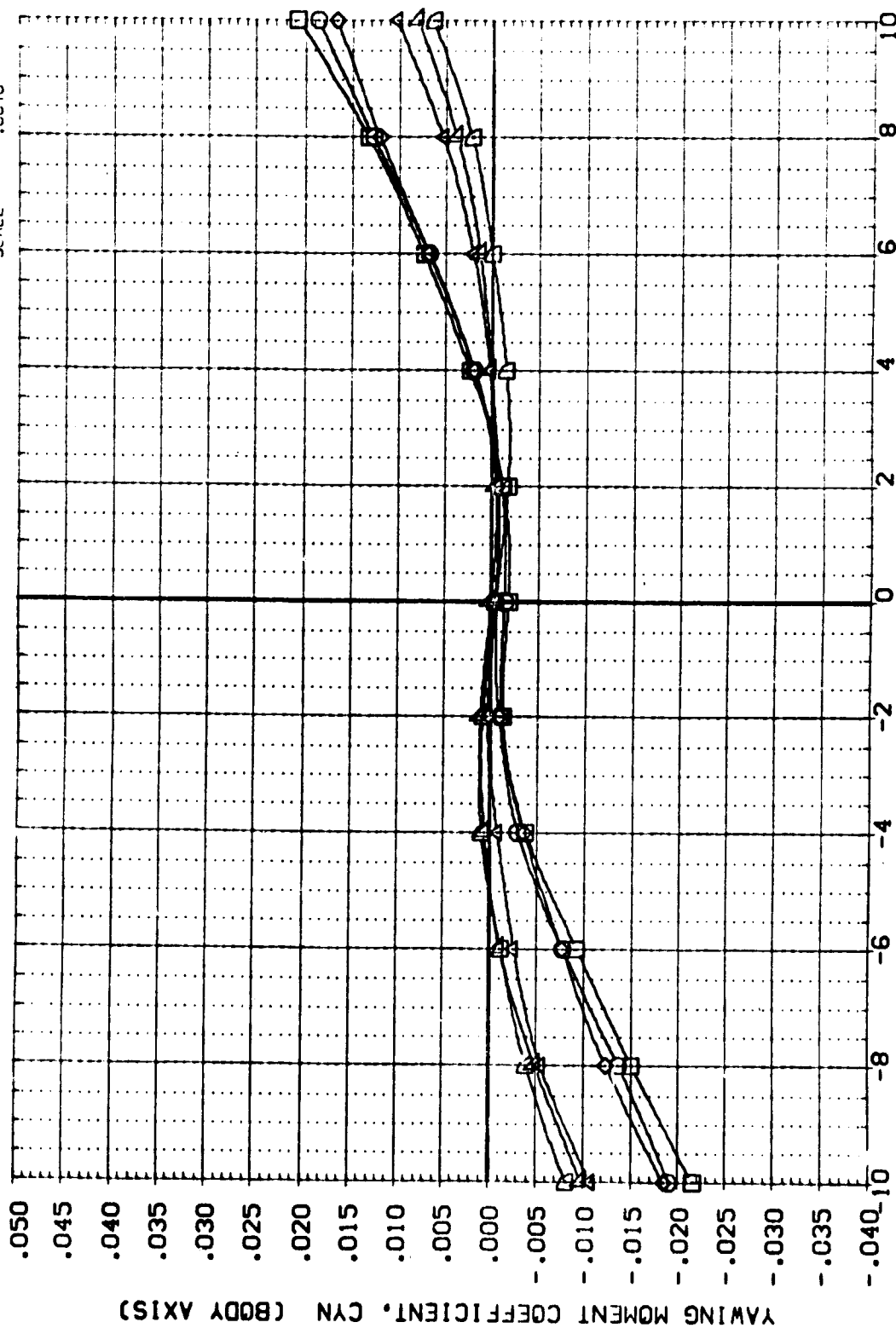
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T08)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T09)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130 IN.
(A83T10)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1500	.140	SREF 5.3130 IN.
(A83T11)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5490 IN.
(A83T12)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000 IN.
(A83T13)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(D)MACH = 1.46

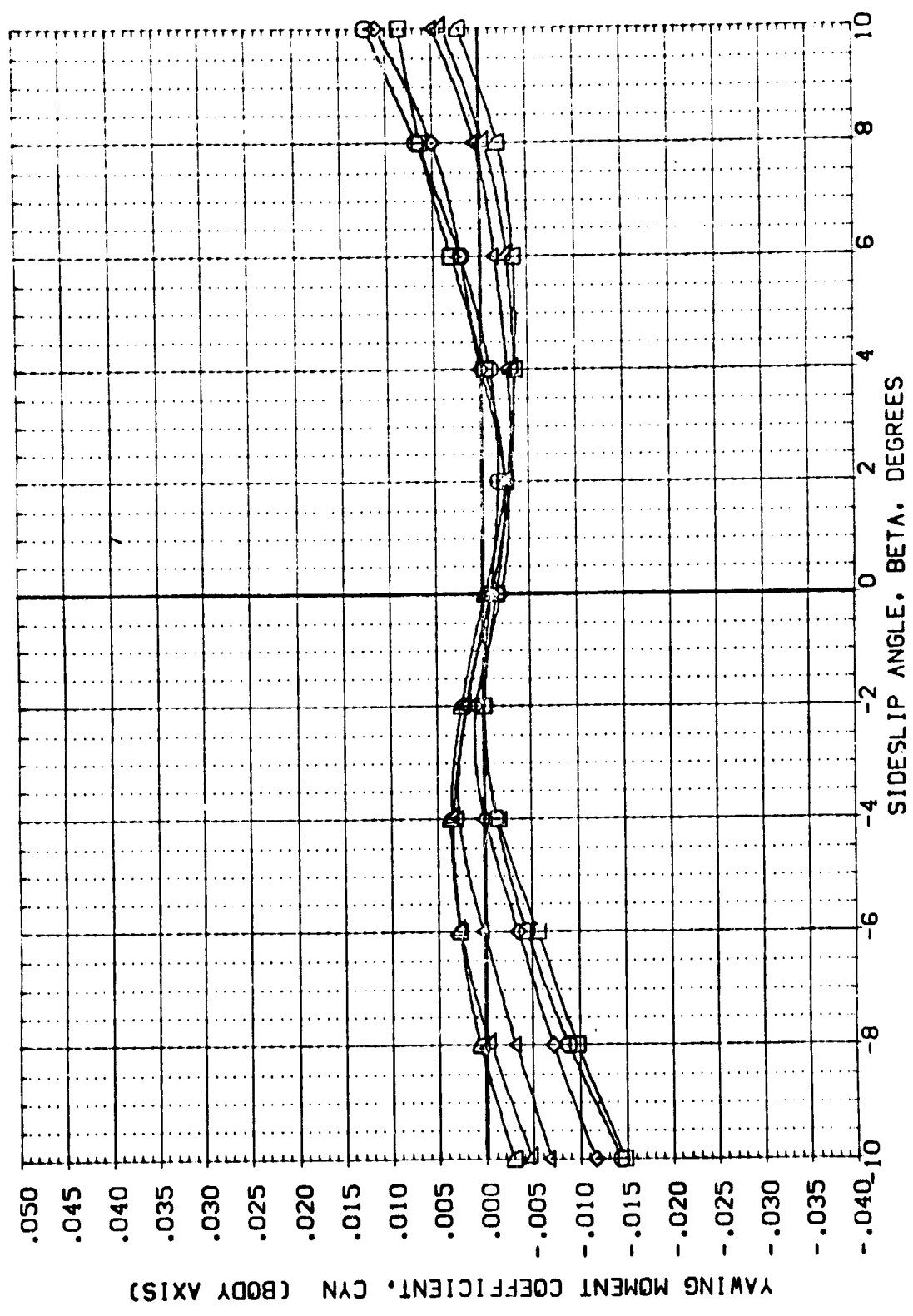
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SCALE
(A83T08)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	SREF	6.1980
(A83T09)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	LREF	5.3130
(A83T10)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	BREF	5.3130
(A83T11)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP	2.5450
(A83T12)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP	.0000
(A83T13)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	SCALE	.0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SCALE
(A83108)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	SREF 6.1980	50. IN
(A83109)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	LREF 5.3130	2. IN
(A83110)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	BREF 5.3130	2. IN
(A83111)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP 2.5450	2. IN
(A83112)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP .0000	2. IN
(A83113)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP .0000	2. IN
					SCALE .0040	



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83T08) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(A83T09) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(A83T10) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(A83T11) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(A83T12) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

(A83T13) MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)

ALPHA ORG INC DELTA Z

5.000 -.500 .140

5.000 .500 .140

5.000 1.500 .280

5.000 .500 .280

5.000 1.500 .280

REFERENCE INFORMATION

SREF 6.1980 SO. IN

LREF 5.3130 IN.

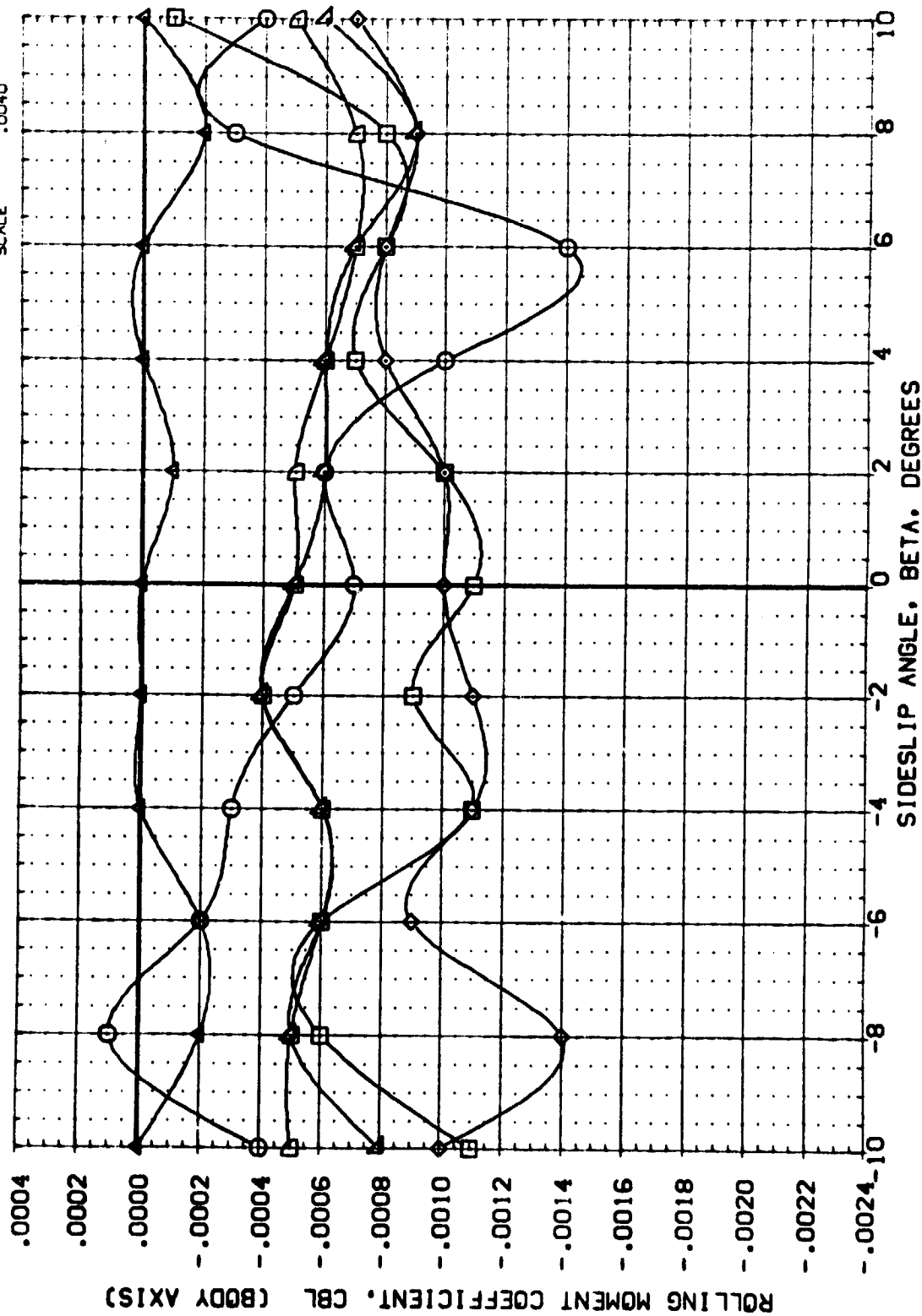
BREF 5.3130 IN.

XMRP 2.5490 IN.

YMRP .0000 IN.

ZMRP .0000 IN.

SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .90

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORBITAL DELTA Z REFERENCE INFORMATION

(A83T08) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 -.500 .140 SREF 6.1980 SQ. IN

(A83T09) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 .500 .140 LREF 5.3130 IN

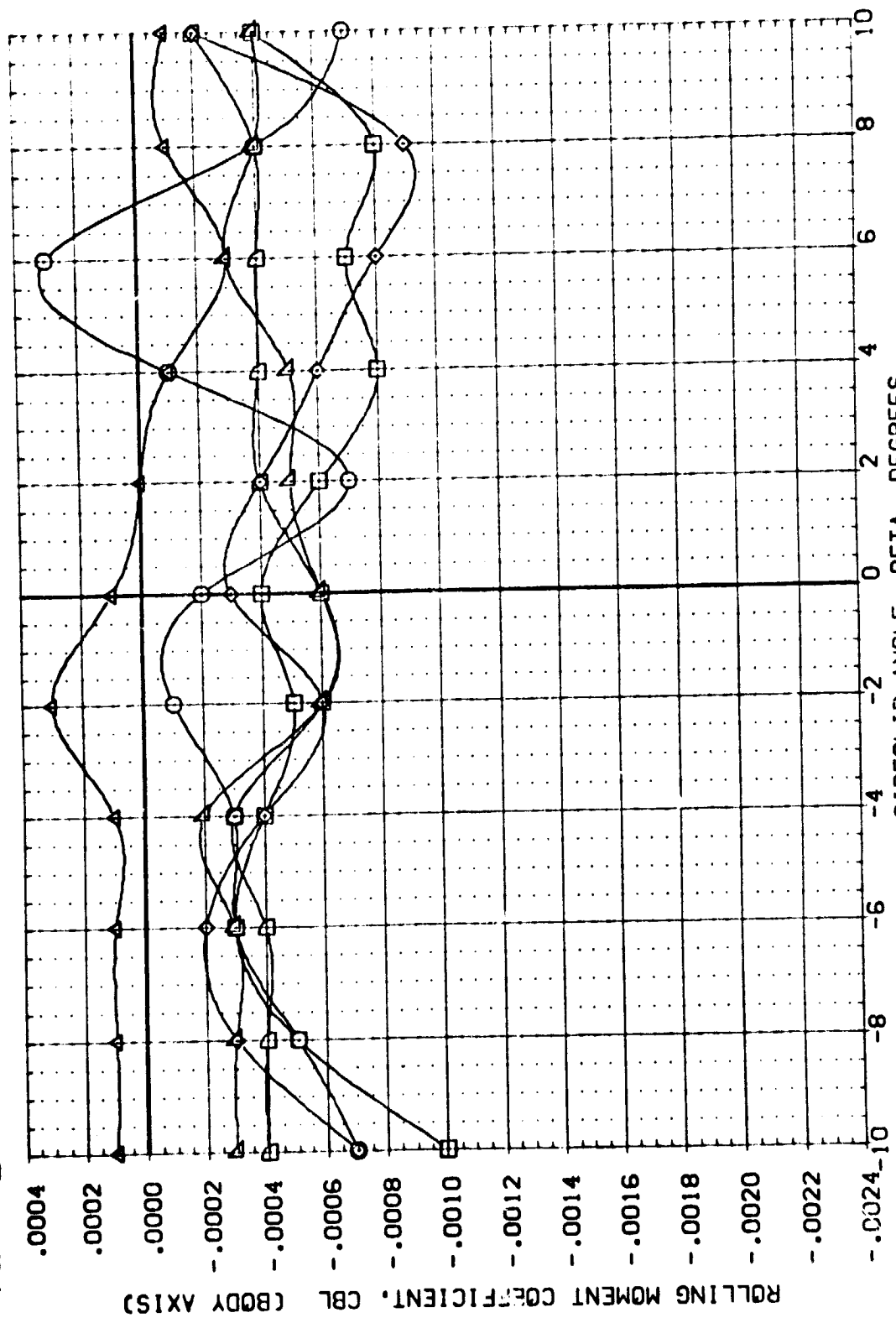
(A83T10) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 1.500 .140 BREF 5.3130 IN

(A83T11) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 -.500 .280 XMRP 2.5490 IN

(A83T12) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 .500 .280 YMRP .0000 IN

(A83T13) MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2) 5.000 1.500 .280 ZMRP .0000 IN

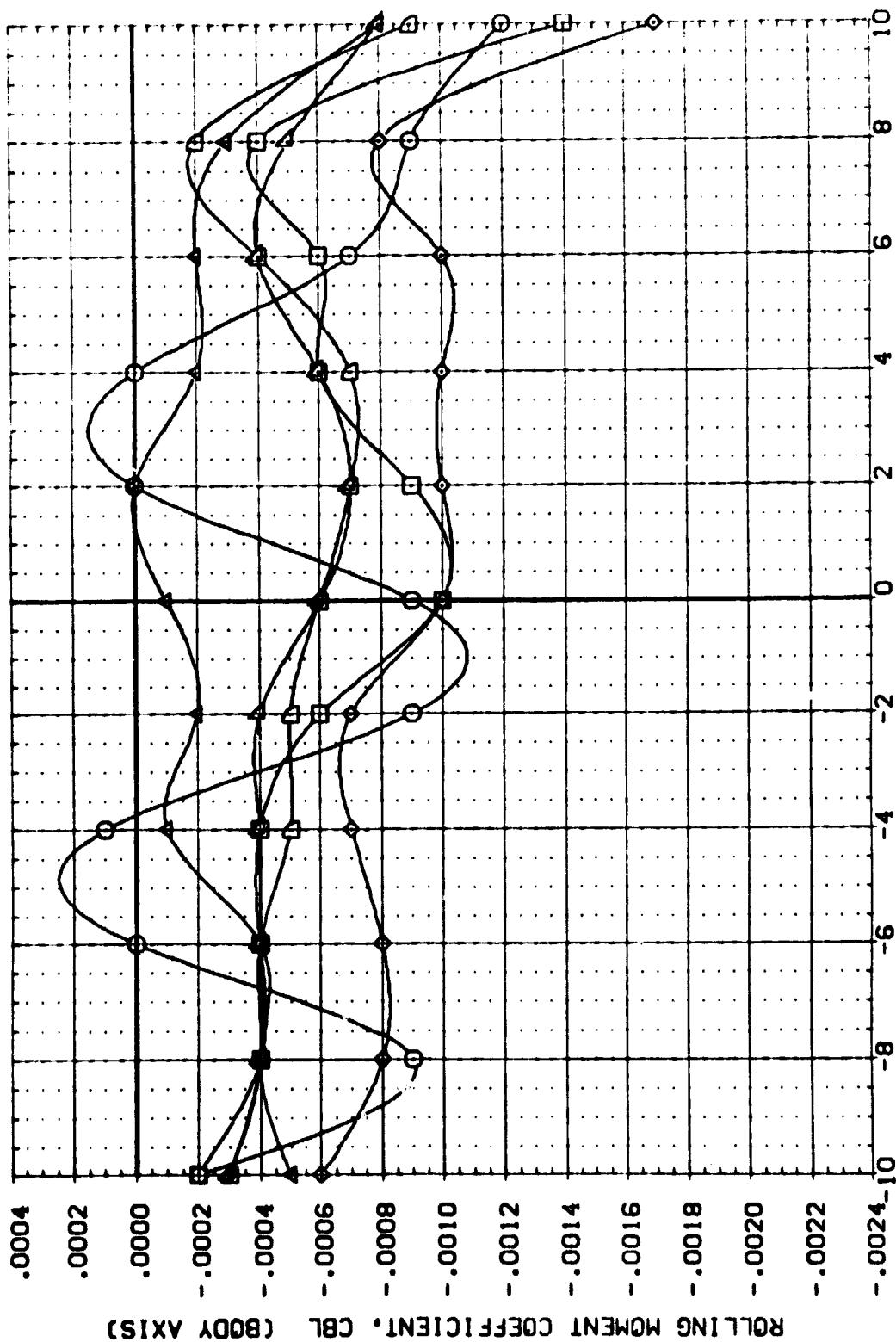
SCALE .0340



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(B)MACH = 1.05

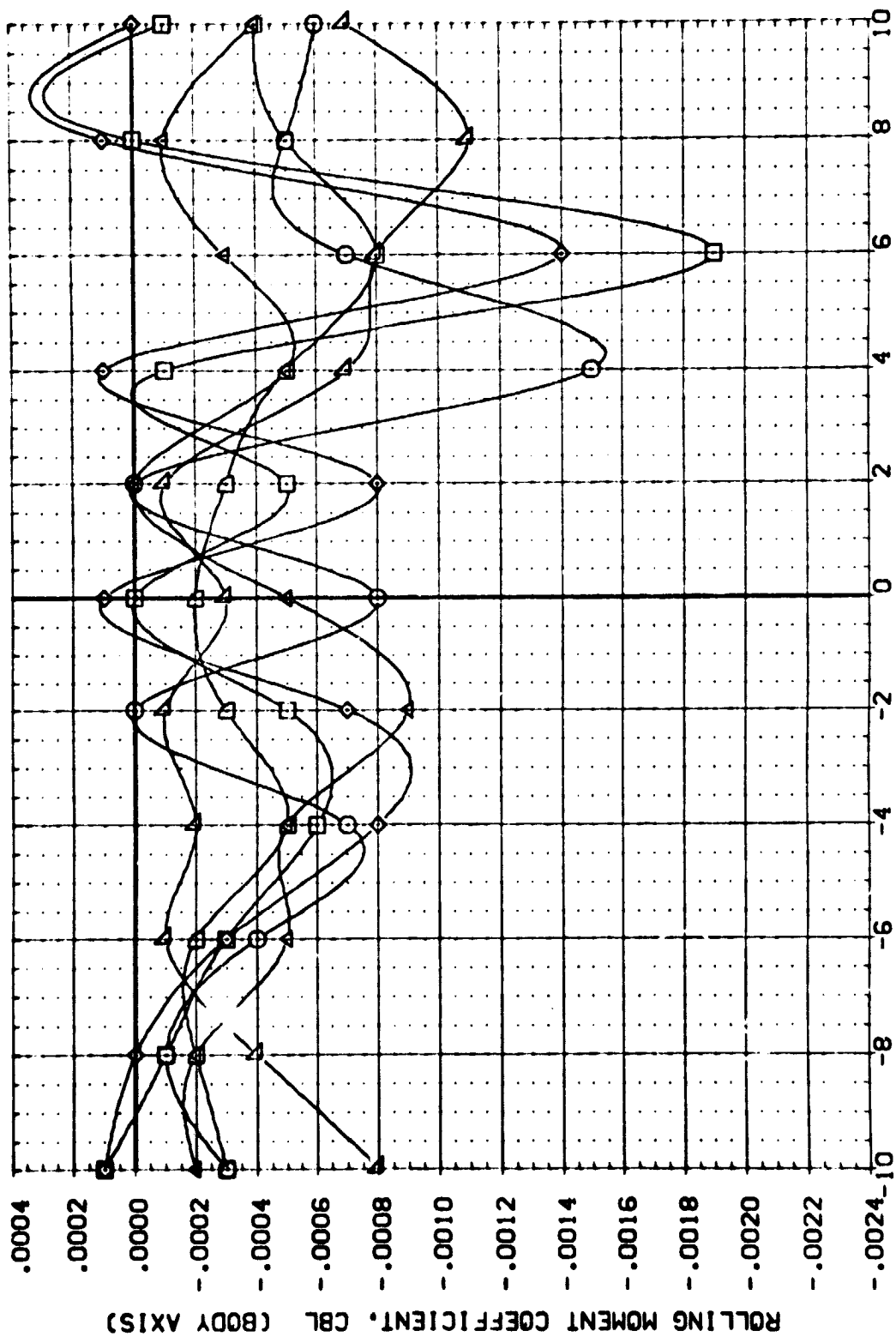
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T08)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T09)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.140	LREF 5.3130 IN.
(A83T10)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.140	BREF 5.3130 IN.
(A83T11)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.280	YMPP 2.5490 IN.
(A83T12)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.280	ZMPP .0000 IN.
(A83T13)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	5.000	-500	.280	SCALE .0000



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.25

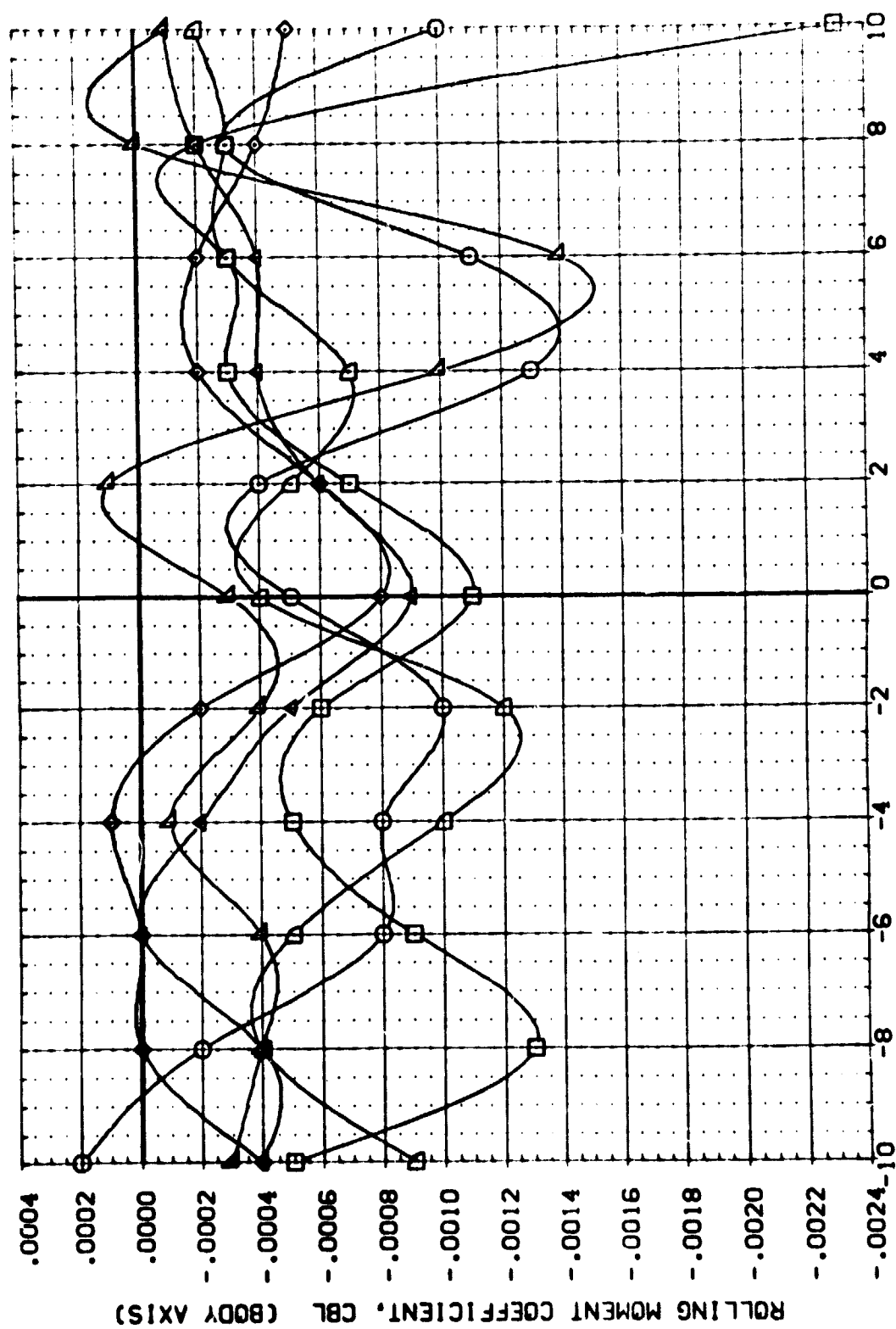
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(A83T08)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	SREF	6.1980
(A83T09)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	LREF	5.3130
(A83T10)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.140	BREF	5.3130
(A83T11)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	XMRP	2.5490
(A83T12)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	YMRP	.0000
(A83T13)	MSFC 570(IASIF)(T9)/(03)/(S3/2)/(S3/2)	5.000	-500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(0)MACH = 1.46

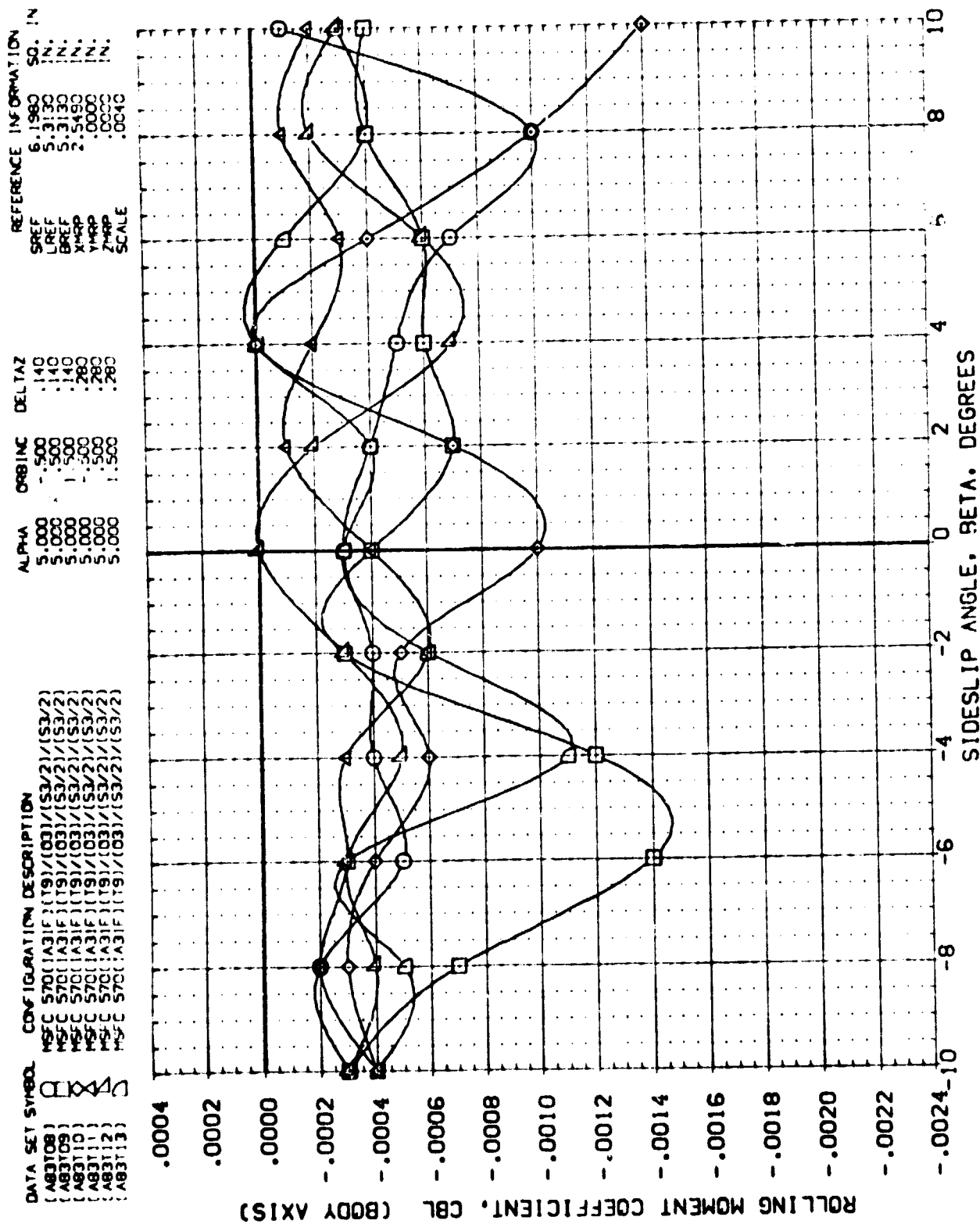
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83108)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	-.500	.140	SREF 5.1990
(A83109)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	-.500	.140	LREF 5.3130
(A83110)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	1.500	.140	BREF 5.3130
(A83111)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	-.500	.280	YMRP 2.5450
(A83112)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	-.500	.280	ZMRP .0000
(A83113)	MSFC 570((A31F)(T9)/(S3/2)/(S3/2))	5.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (S3/2)/(S3/2)

(E)MACH = 2.99

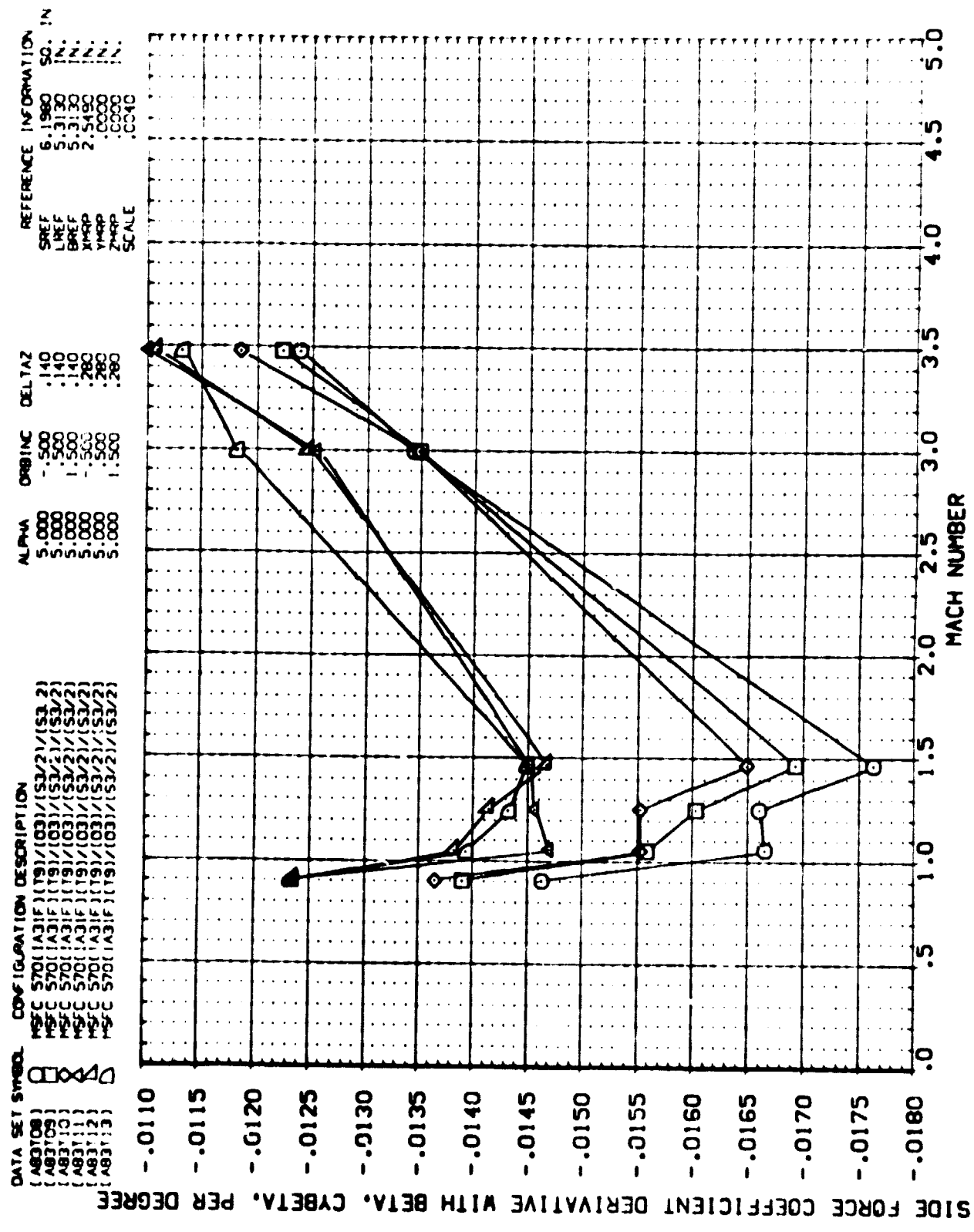




STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S1/2)

$$[F]_{\text{MACH}} = 3.48$$

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STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

DATA SET SYMBOL
 [A83108]
 [A83109]
 [A83110]
 [A83111]
 [A83112]
 [A83113]

CONFIGURATION DESCRIPTION
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)
 MSFC 570(I A3 I F)(T9)/(S3/2)/(S3/2)

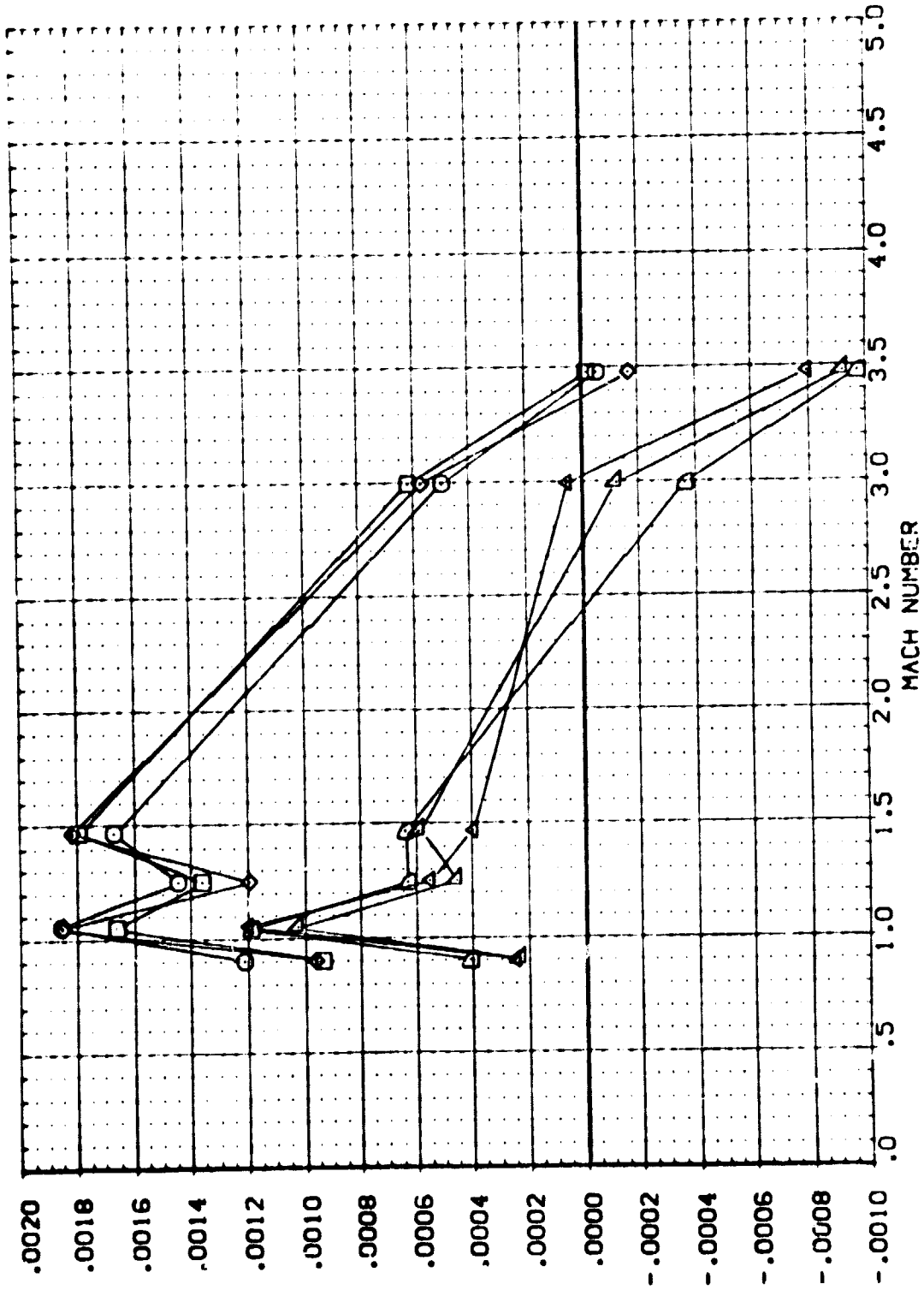
ALPHA
 5.000
 5.000
 5.000
 5.000
 5.000
 5.000

OSBINC
 -.500
 -.500
 1.500
 -.500
 -.500
 1.500

DELTA Z
 .140
 .140
 .140
 .280
 .280
 .280

REFERENCE INFORMATION
 SREF 5.198C
 LREF 5.313C
 BREF 5.313C
 XPROP 2.5450
 YPROP .0000
 ZPROP .0000
 SCALE .0040

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

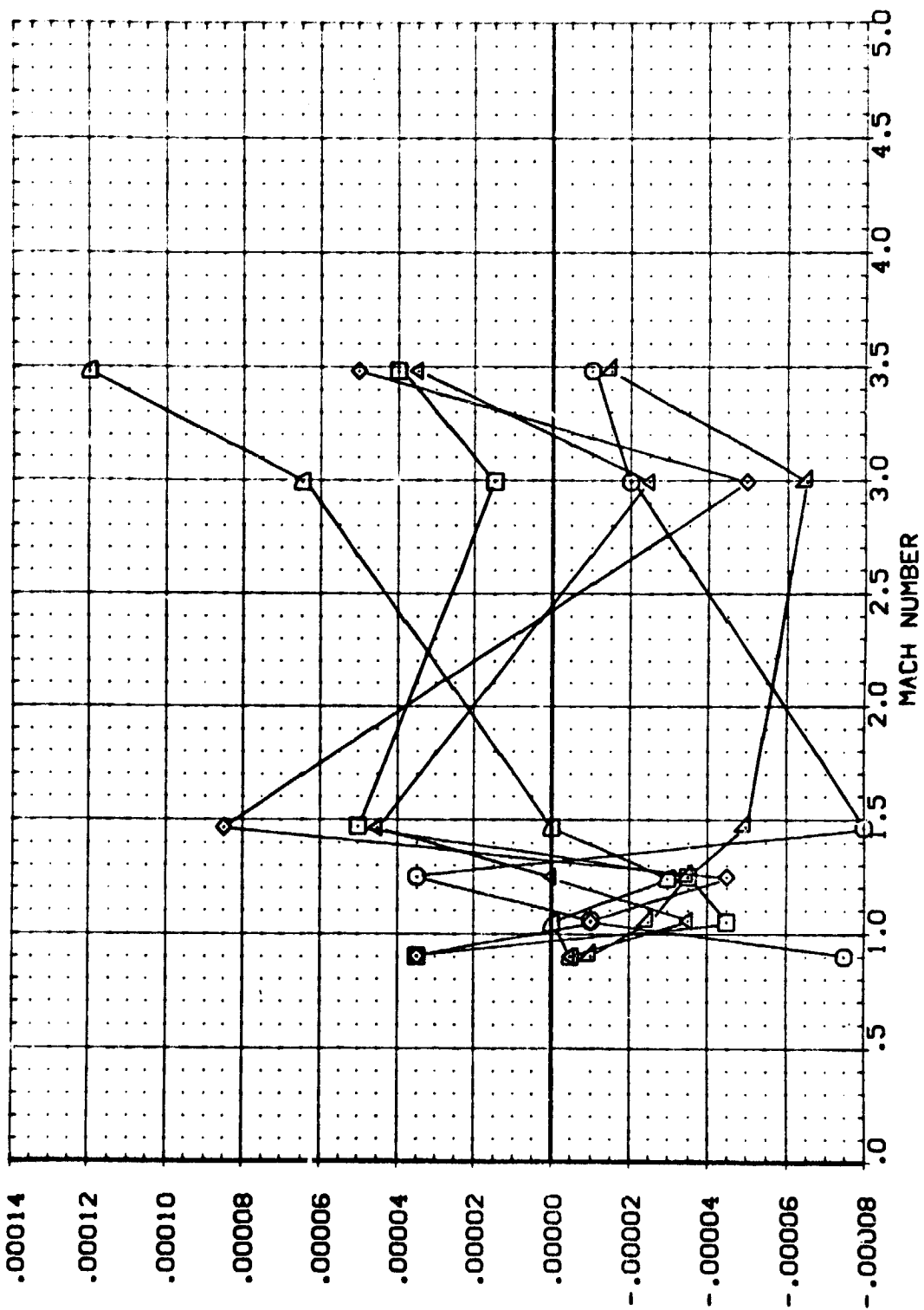


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL:  REFERENCE INFORMATION: N

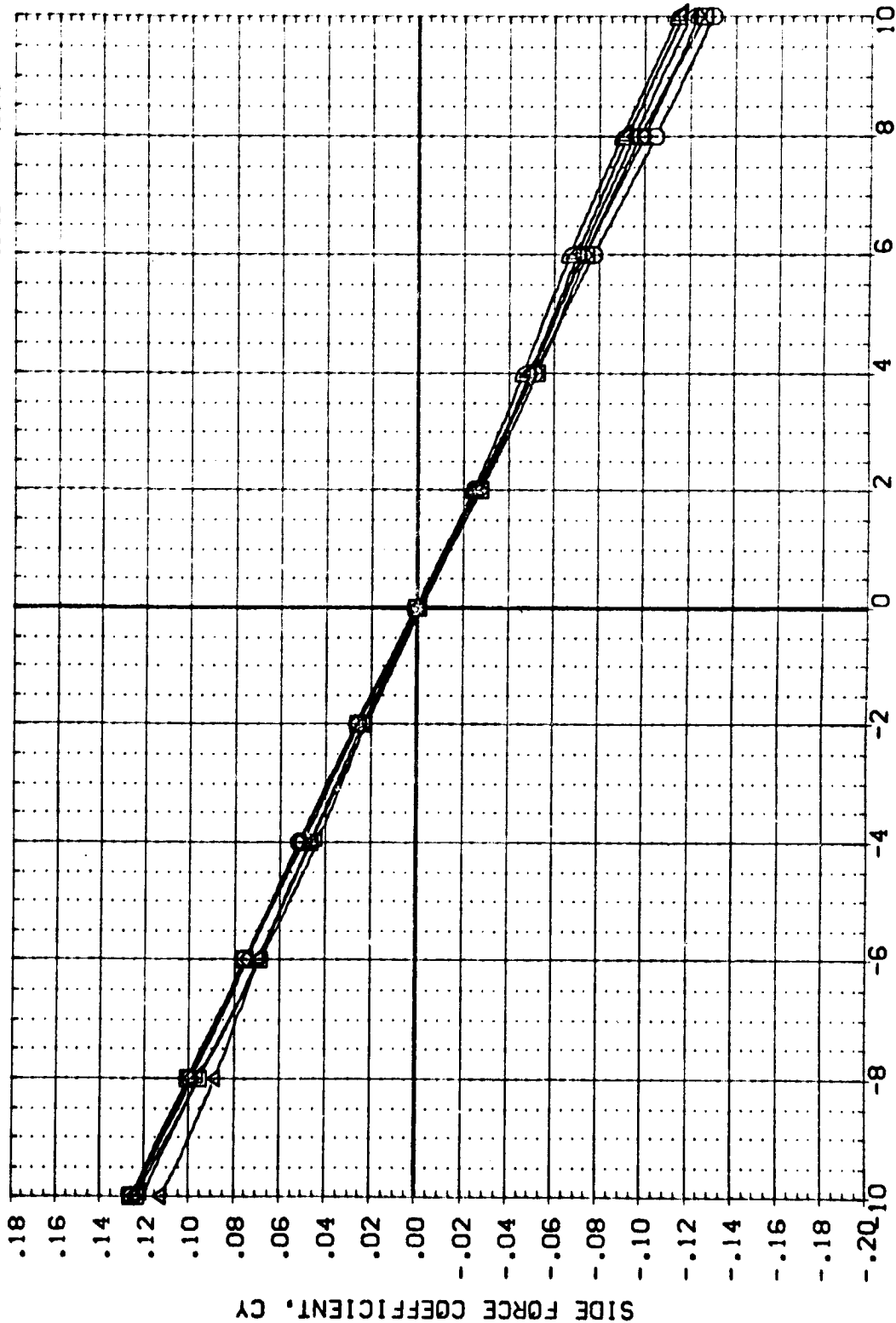
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT	DELTA Z	REFERENCE INFORMATION
(A83108)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.140	SREF 6.1980
(A83109)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.140	LREF 5.3130
(A83110)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.140	BREF 5.3130
(A83111)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.280	YMRP 2.5490
(A83112)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.280	ZMRP .0000
(A83113)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	5.000	1.500	.280	SCALE .0040

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

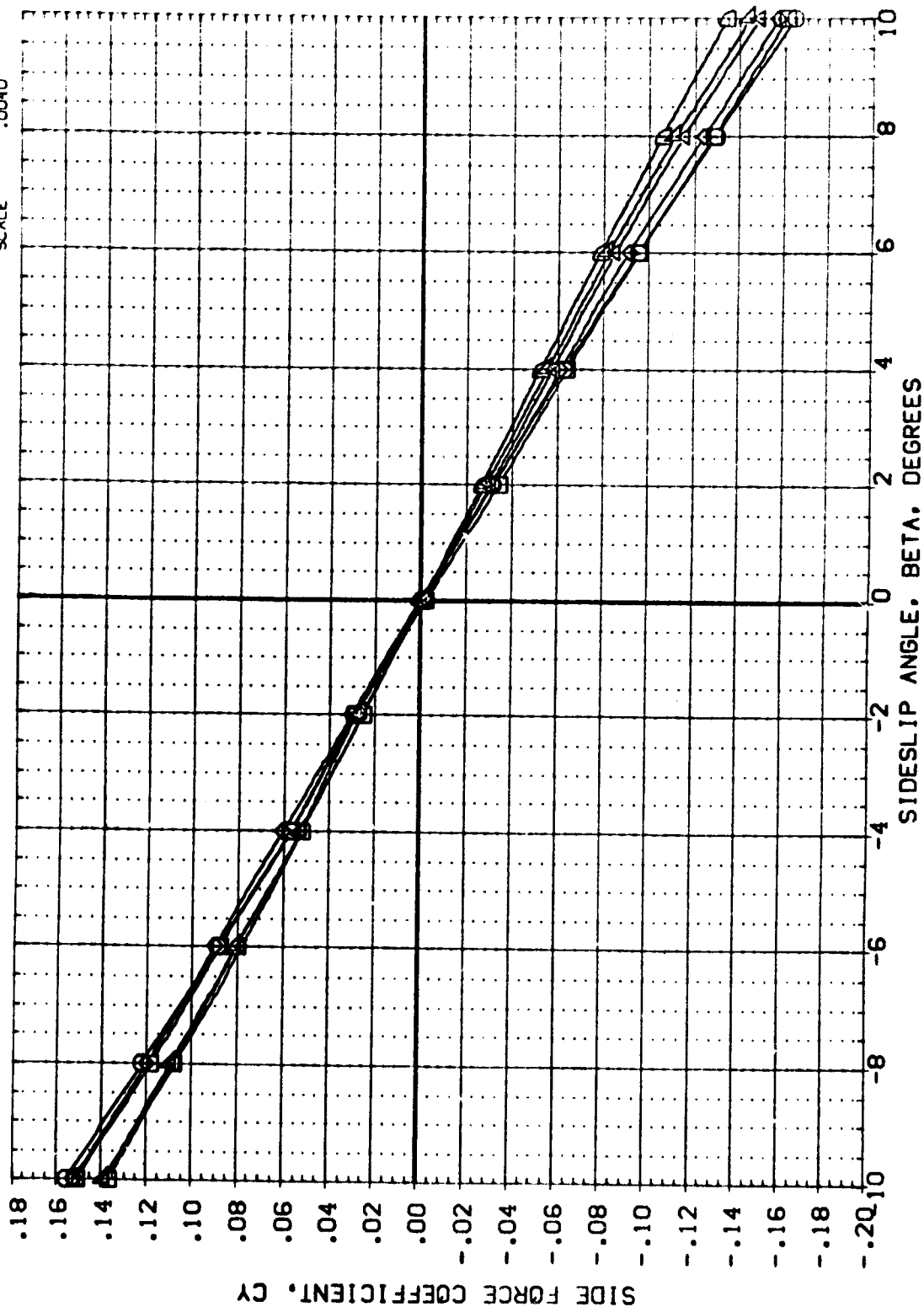
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A8314)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	SREF 6.1980
(A8315)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	LREF 5.3130
(A8316)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	BREF 5.3130
(A8317)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	YMRP 2.5480
(A8318)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	ZMRP .0000
(A8319)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-1.500	.140	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .90

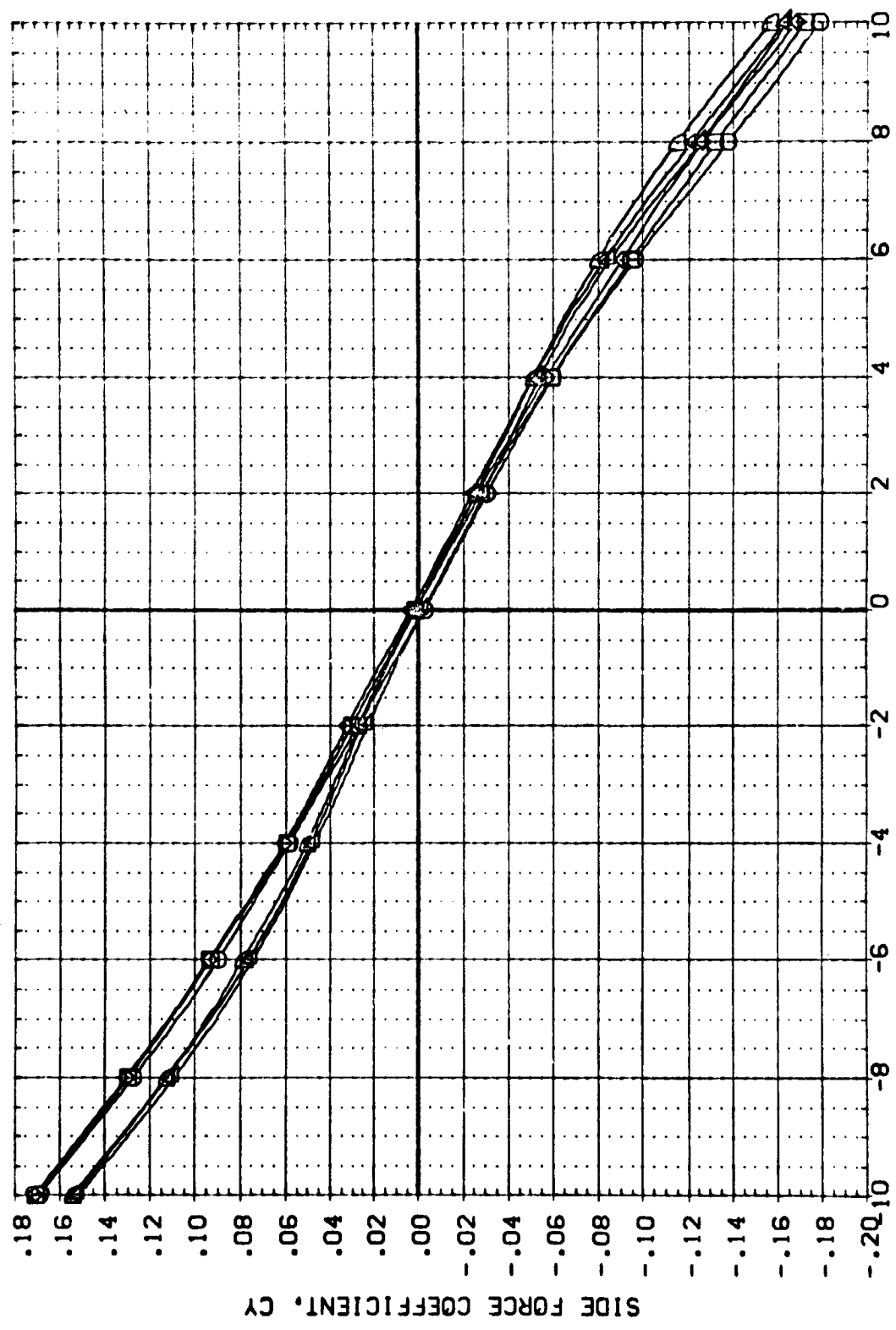
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORIGIN	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980
(A83T15)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130
(A83T16)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130
(A83T17)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP 2.5490
(A83T18)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000
(A83T19)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(B)MACH = 1.05

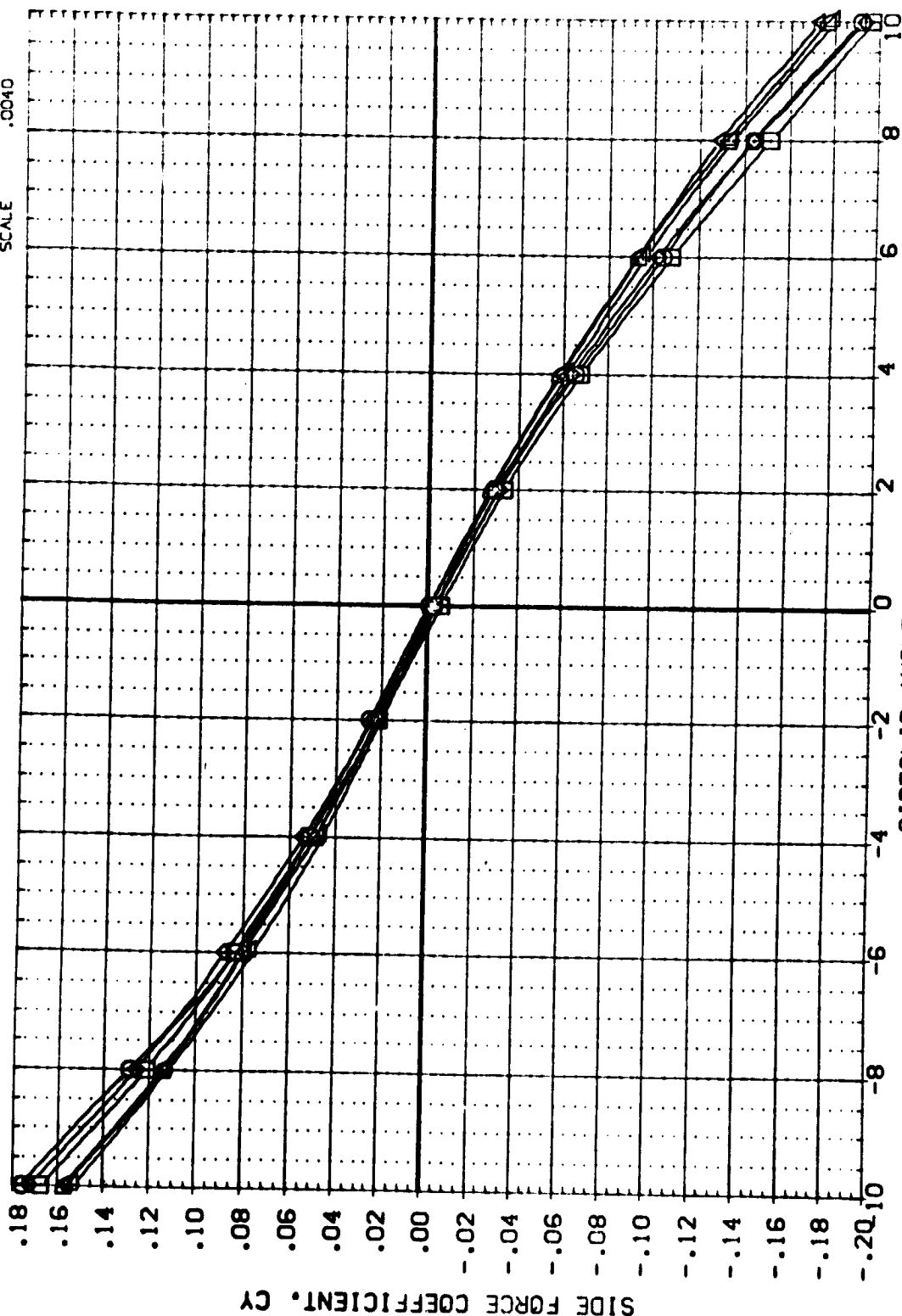
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	SREF 6.1980 SQ. IN
(A83T15)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	LREF 5.3130 IN
(A83T16)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	BREF 5.3130 IN
(A83T17)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	XMRP 2.5490 IN
(A83T18)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	YMRP .0000 IN
(A83T19)	MSFC 570((A31F)(T9)/((03)/((S3/2)/(S3/2))	-5.000	-1.500	.140	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.24

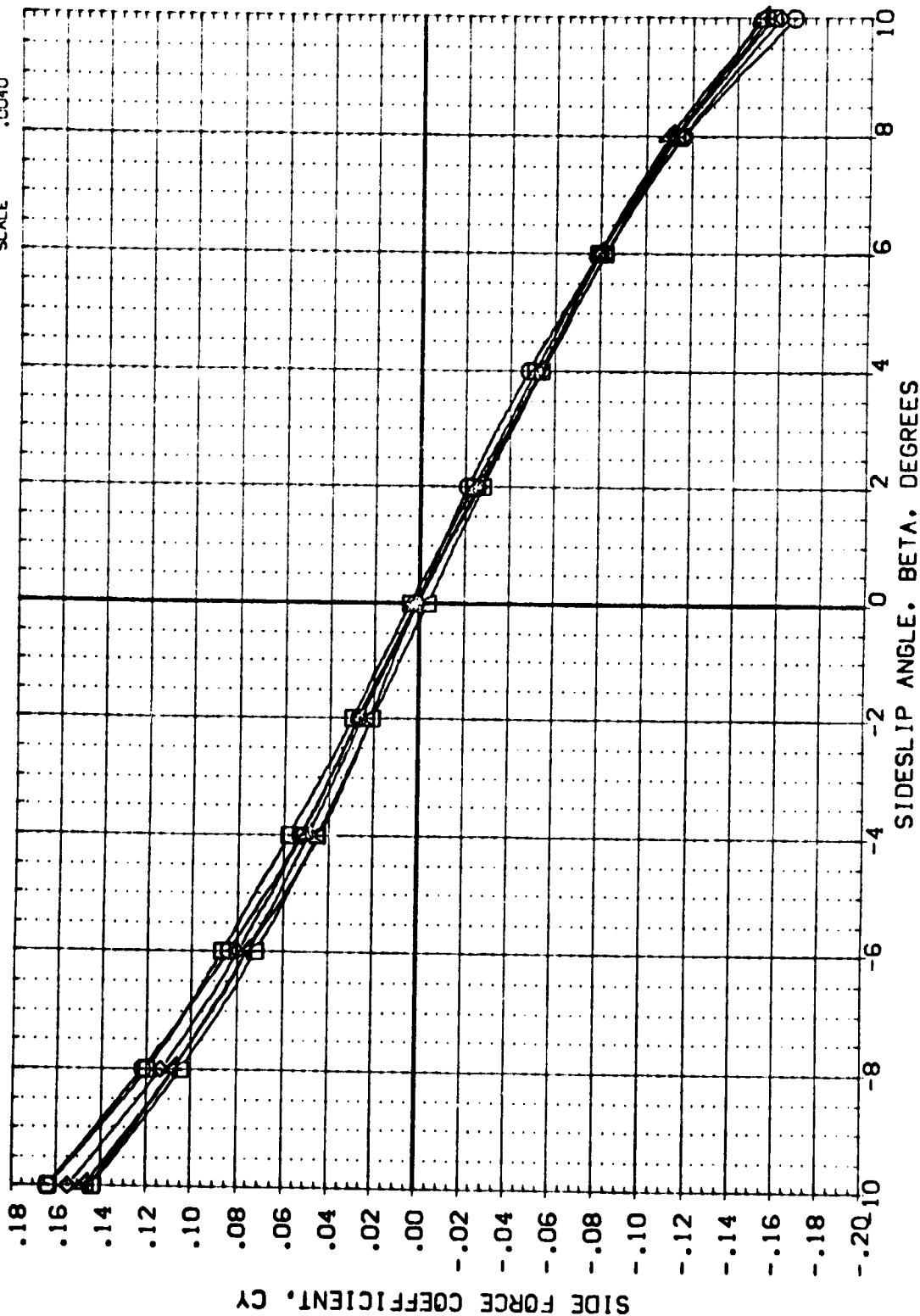
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980
(A83T15)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130
(A83T16)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130
(A83T17)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490
(A83T18)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000
(A83T19)	MSFC 570(I A3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(O)MACH = 1.47

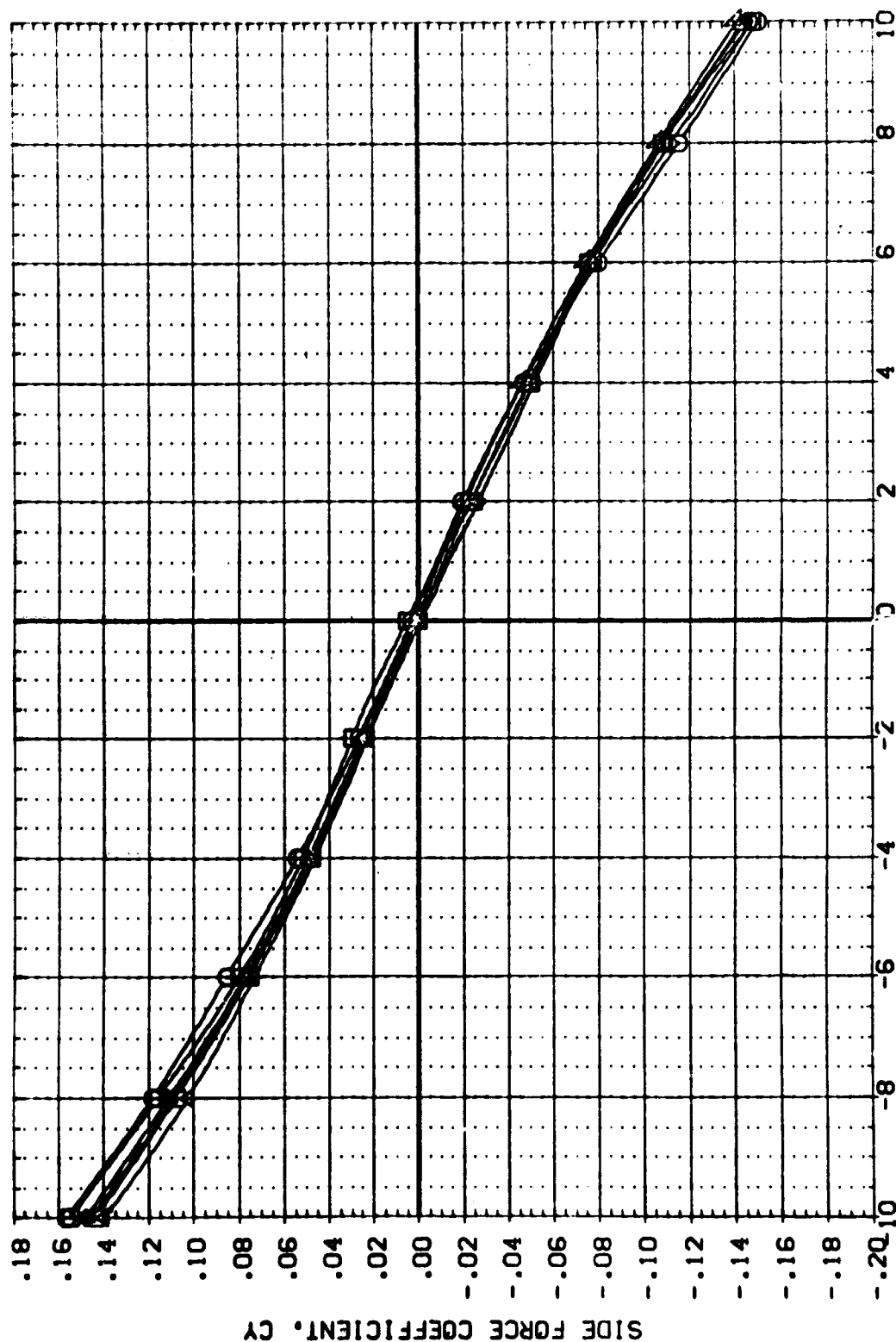
DATA SET SYMB.	CONFIGURATION DESCRIPTION	ALPHA	ORBIT	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T15)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN.
(A83T18)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570(A31F)(T9)(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 2.99

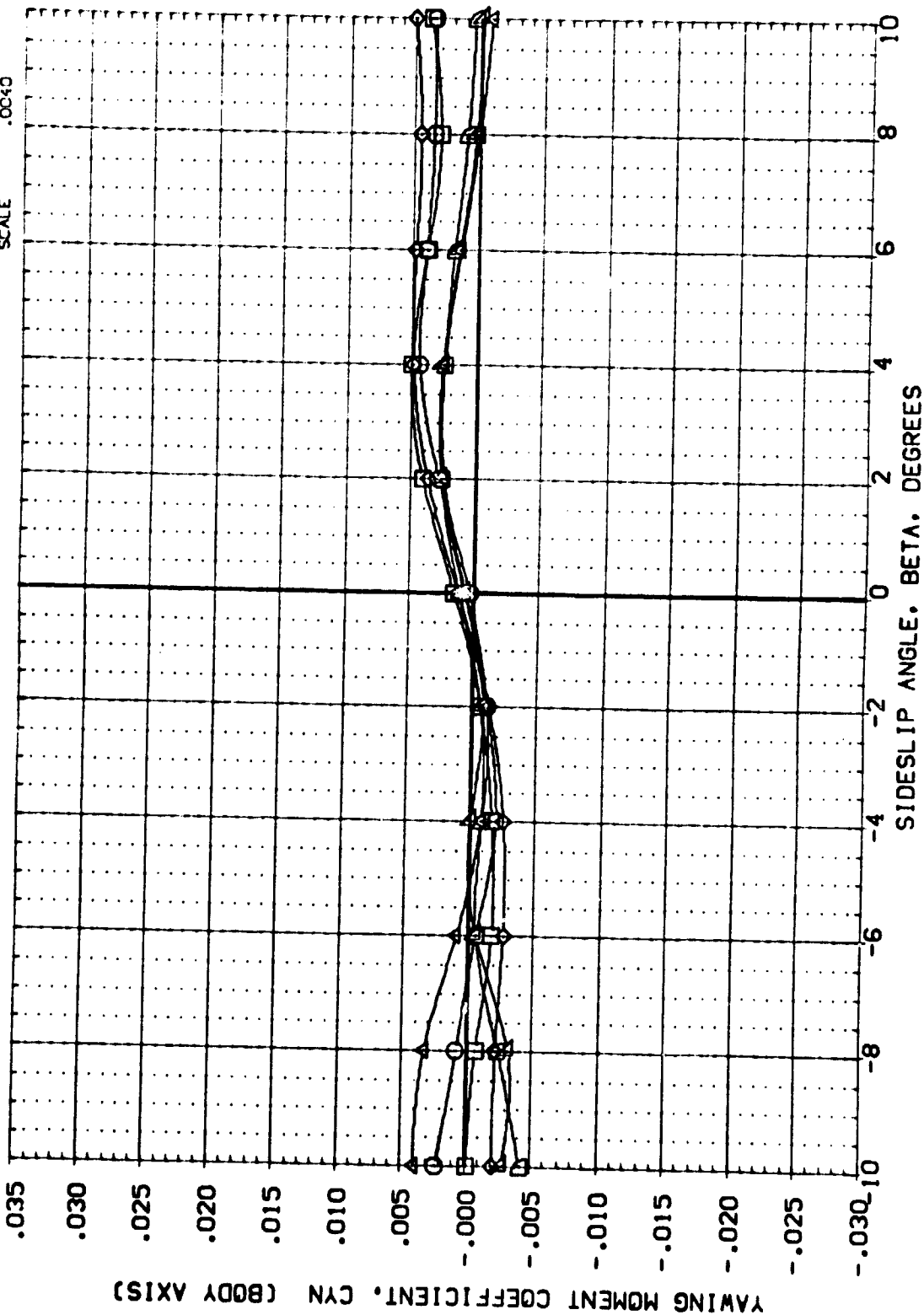
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORIGIN	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SO. IN
(A83T15)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN.
(A83T18)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(F)MACH = 3.48

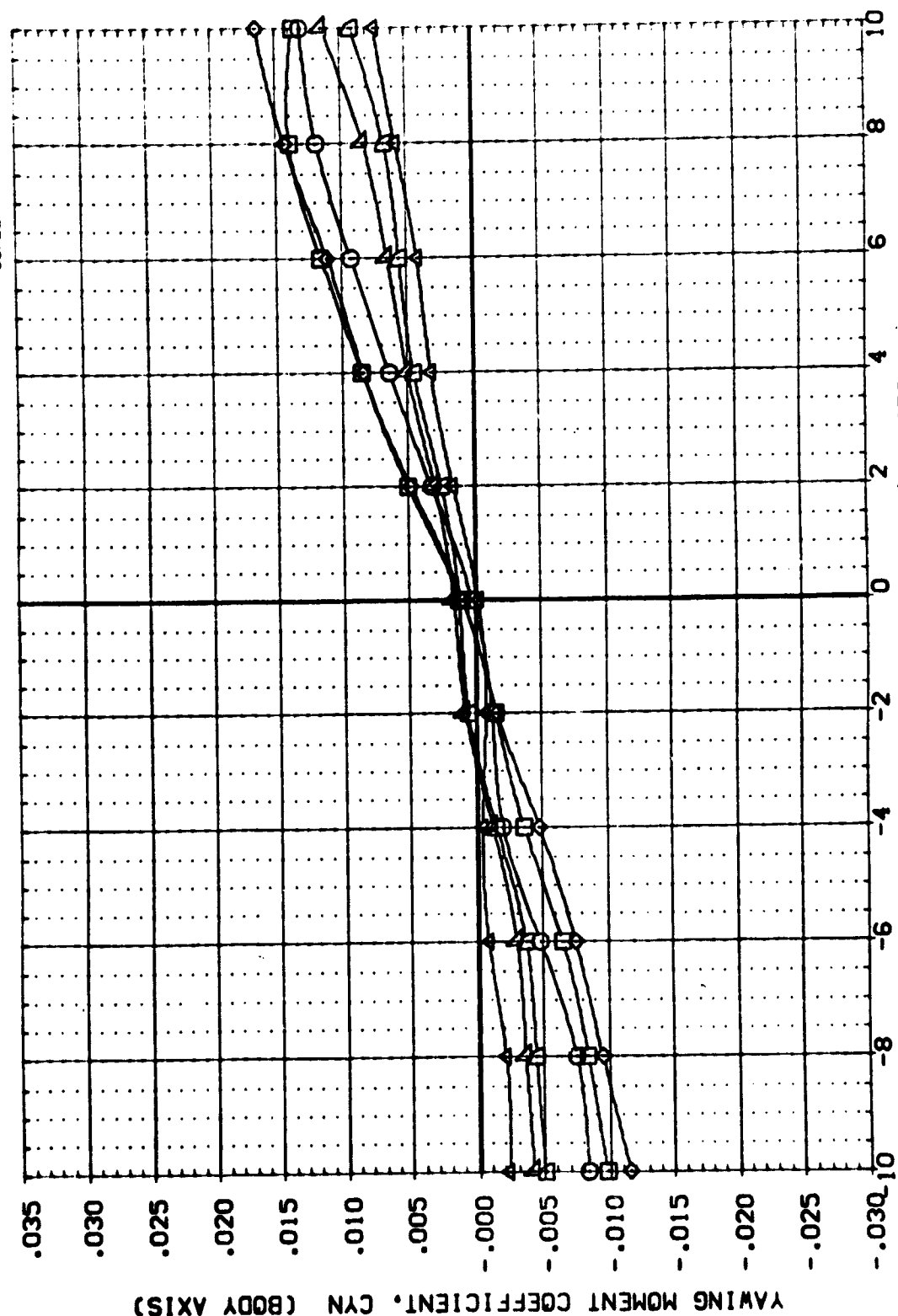
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	-500	.140	SREF 6.1980 50. IN
(A83T15)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	1.500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	-500	.140	XMRP 2.5490 IN.
(A83T18)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570 (A31F) (T9) (03) (S3/2) (S3/2)	-5.000	1.500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .90

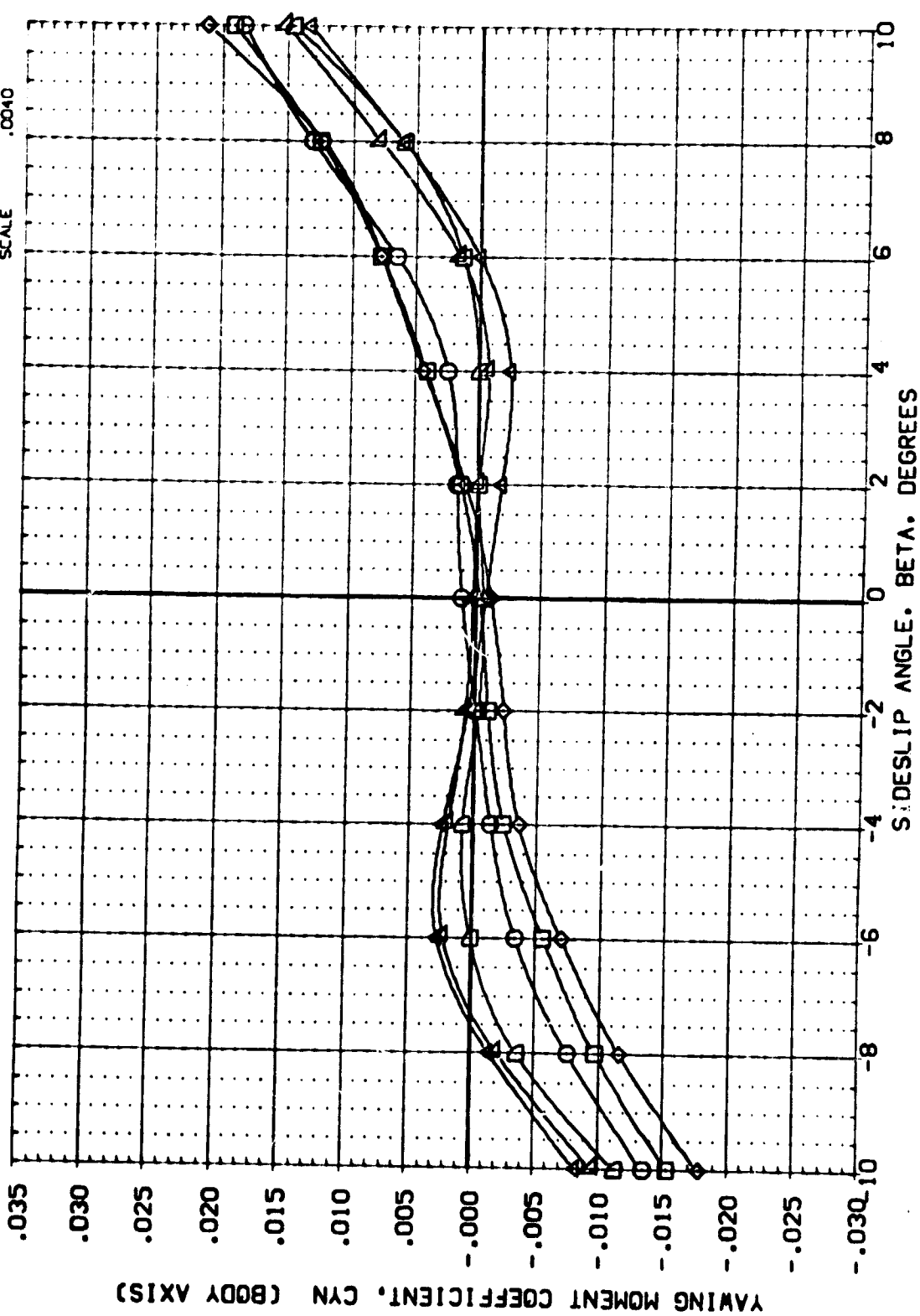
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT	DELTA Z	REFERENCE INFORMATION
(A83T14)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 5.1980
(A83T15)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3.30
(A83T16)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3.30
(A83T17)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490
(A83T18)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000
(A83T19)	HSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(B)MACH = 1.05

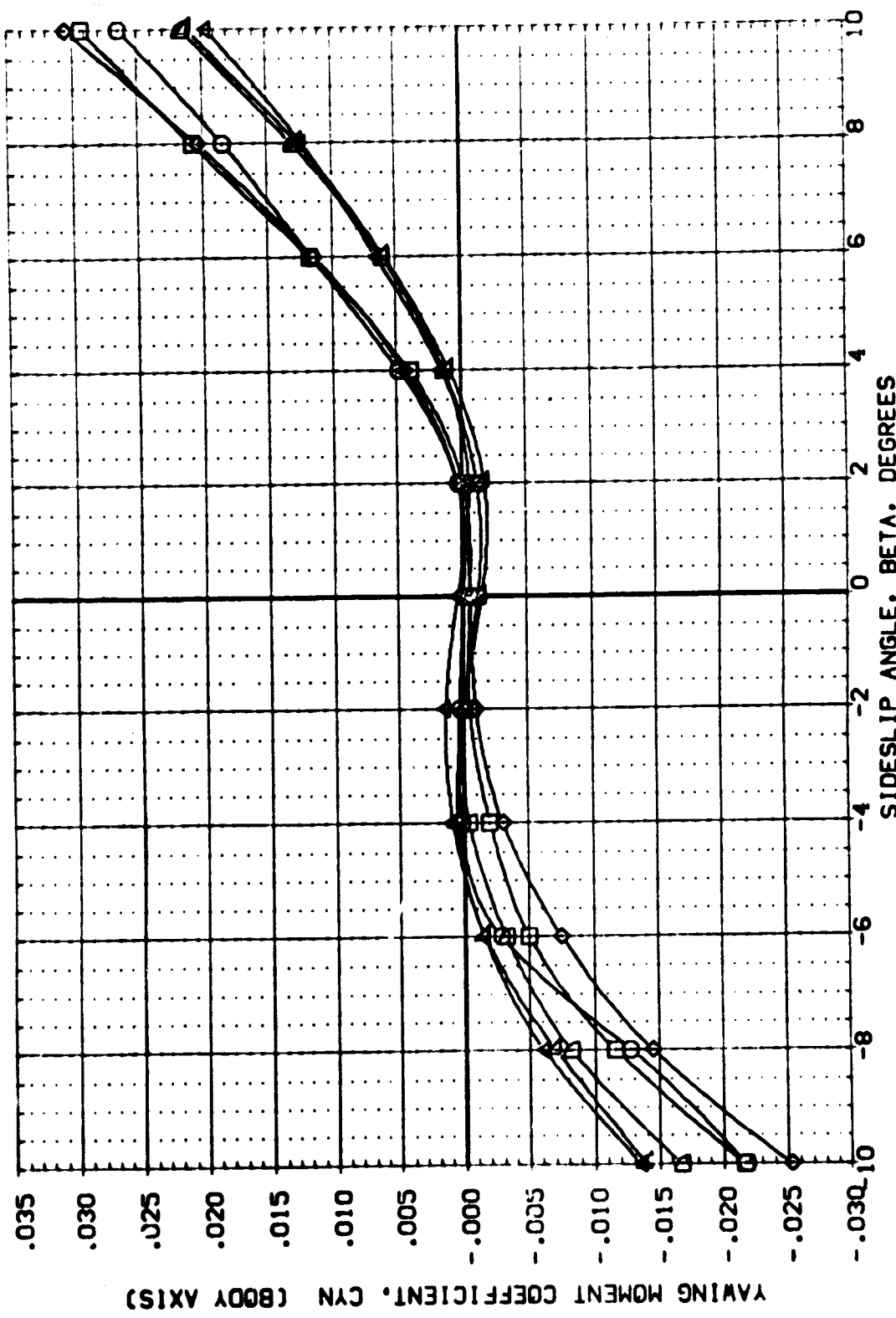
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 5.1980 SO. IN
(A83T15)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5450 IN.
(A83T18)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.24

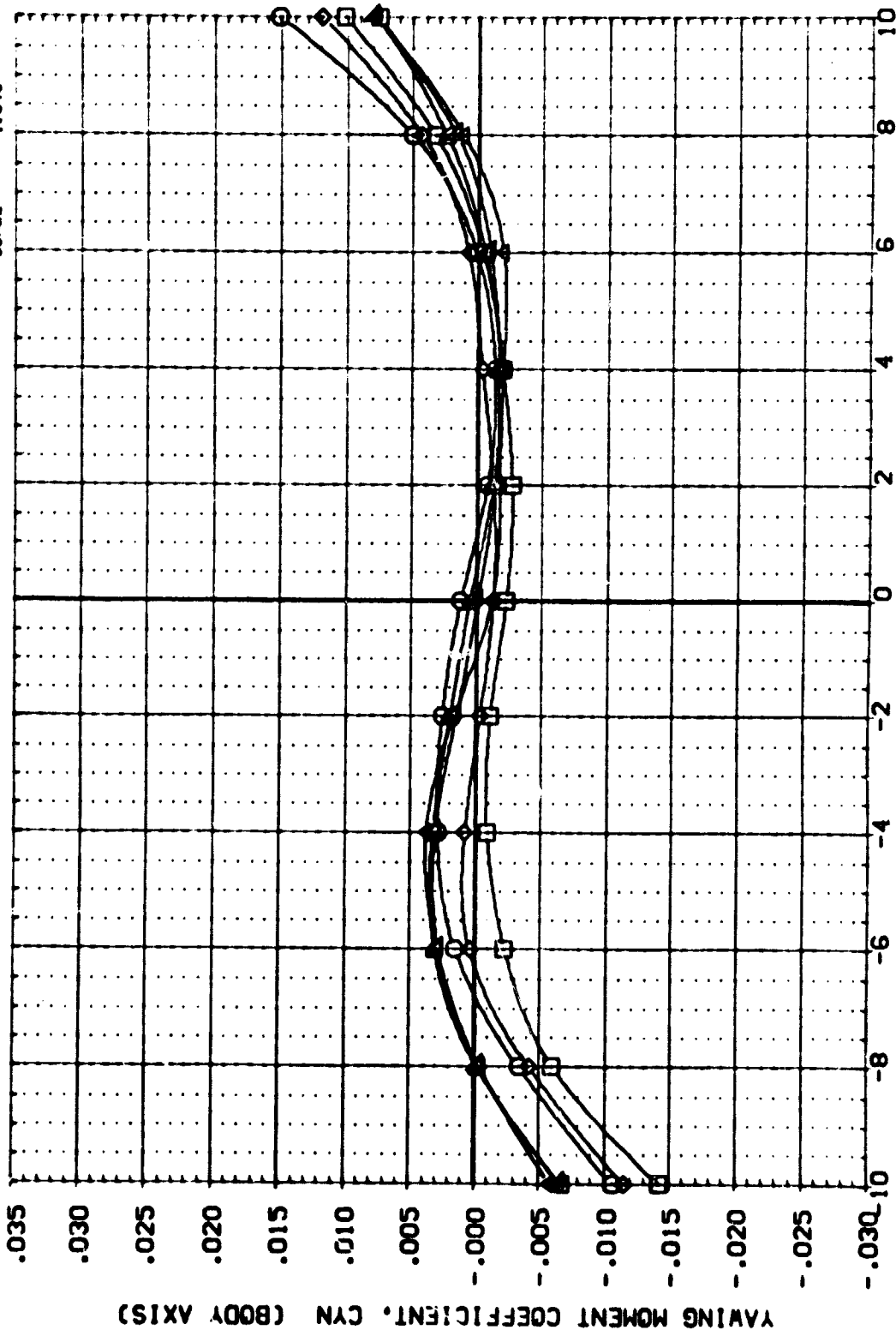
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(A8314)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF	5.1980
(A8315)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF	5.3130
(A8316)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF	5.3130
(A8317)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP	2.5490
(A8318)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP	.0000
(A8319)	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP	.0000
					SCALE	.3040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(O)MACH = 1.47

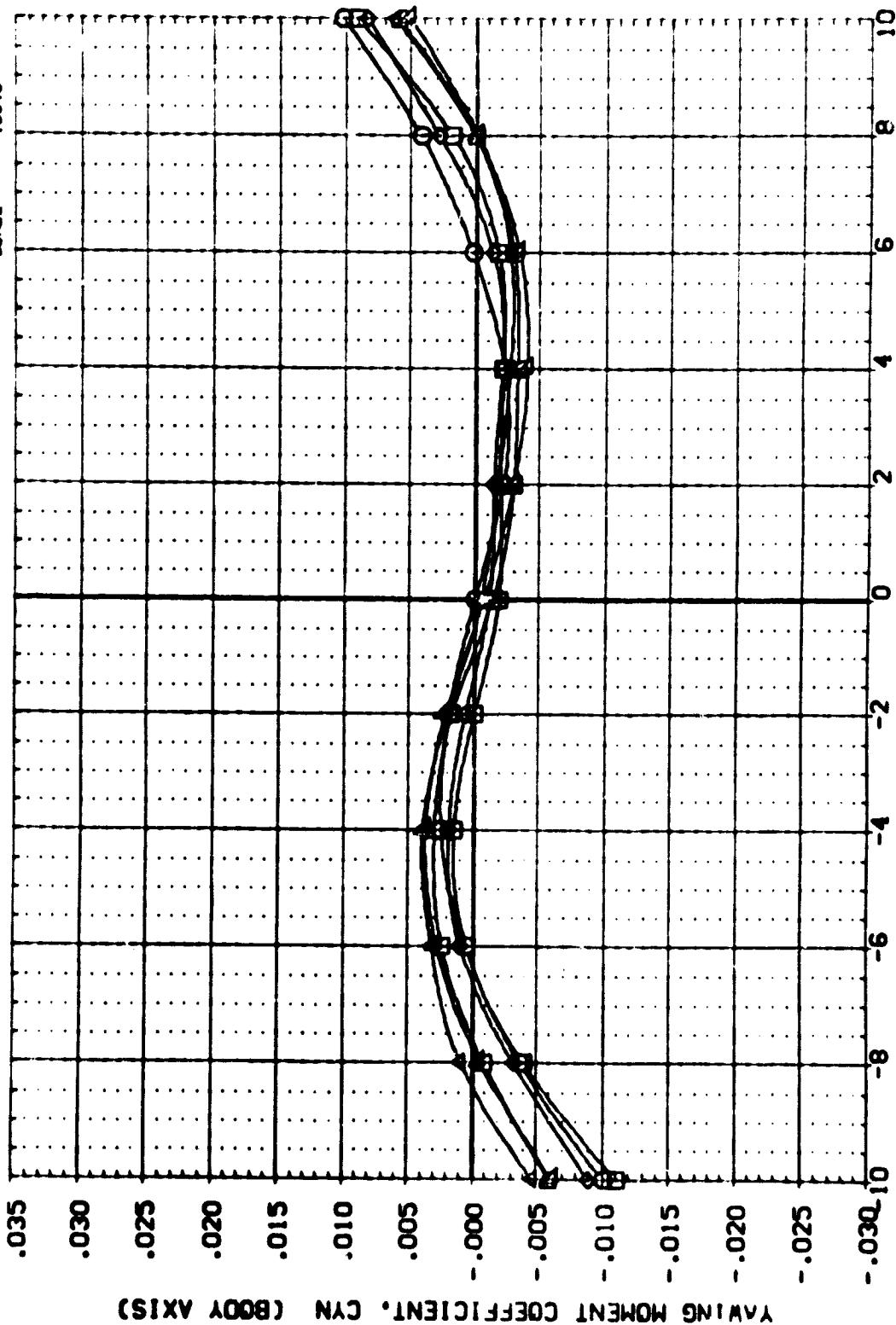
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SCALE
(A33T14)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	SAEF 6.1980	IN
(A33T15)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130	IN
(A33T16)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130	IN
(A33T17)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	YREF 2.5480	IN
(A33T18)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	YREF .0000	IN
(A33T19)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	YREF .0000	IN



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(E)MACH = 2.99

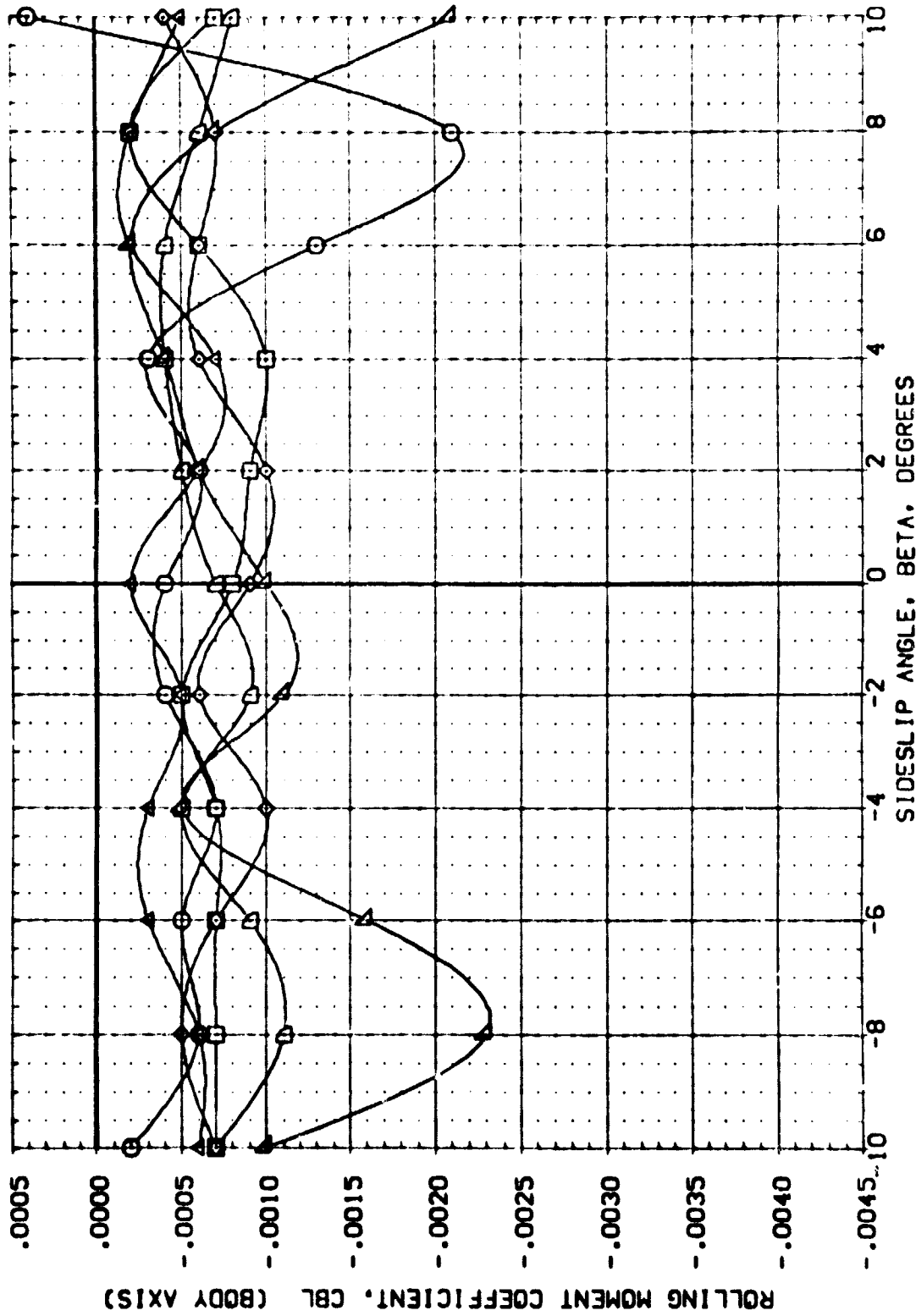
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[A83114]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SO. IN
[A83115]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
[A83116]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
[A83117]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	YREF 2.5490 IN.
[A83118]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	ZREF .0000 IN.
[A83119]	MSFC 570(A31F)(T9)(O3)/(S3/2)/(S3/2)	-5.000	-500	.140	SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(F)MACH = 3.48

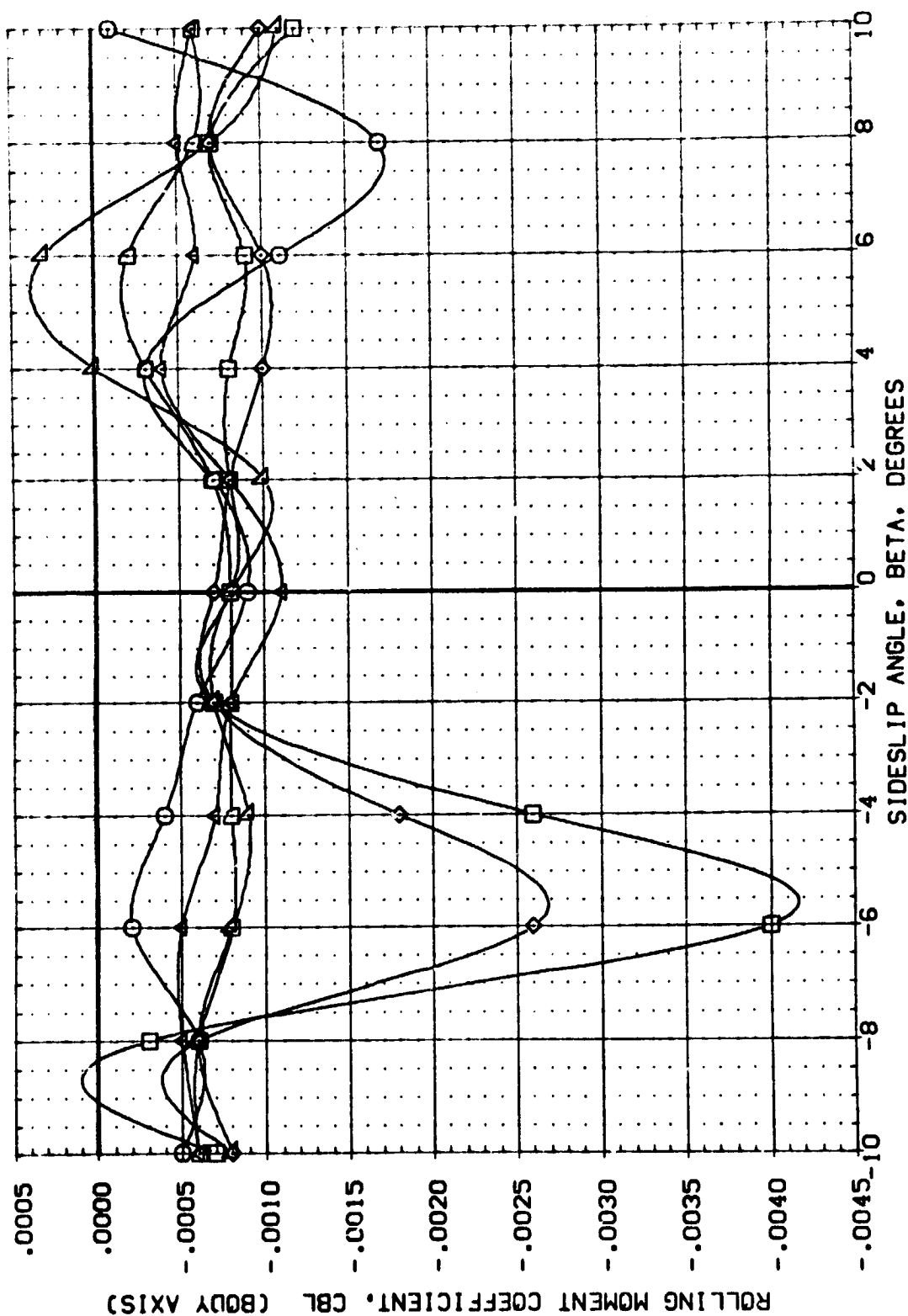
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A03114)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	SREF 6.1980 SO. 1A
(A03115)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	LREF 5.3130 IN. 1A
(A03116)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	BREF 5.3130 IN. 1A
(A03117)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	XREF 2.5490 IN. 1A
(A03118)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	YREF .0000 IN. 1A
(A03119)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	ZREF .0000 IN. 1A
					SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .90

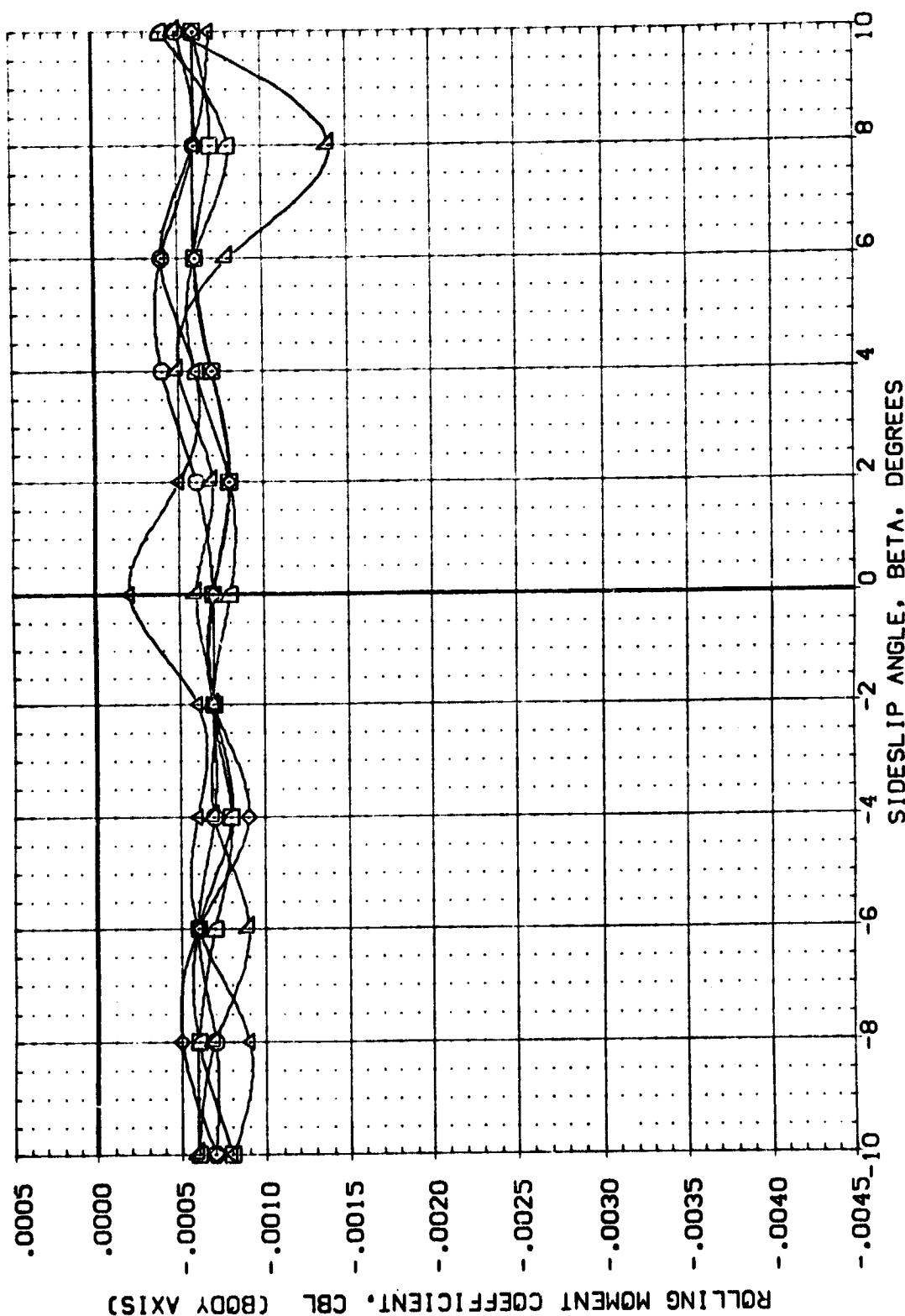
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CARBING	DELTAZ	REFERENCE INFORMATION
[A83114]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	SREF 6.1980 SQ. IN
[A83115]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	LREF 5.3130
[A83116]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	BREF 5.3130
[A83117]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	YMRP 2.5490
[A83118]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	ZMRP .0000
[A83119]	MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)	-5.000	-5.00	.140	SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(B)MACH = 1.05

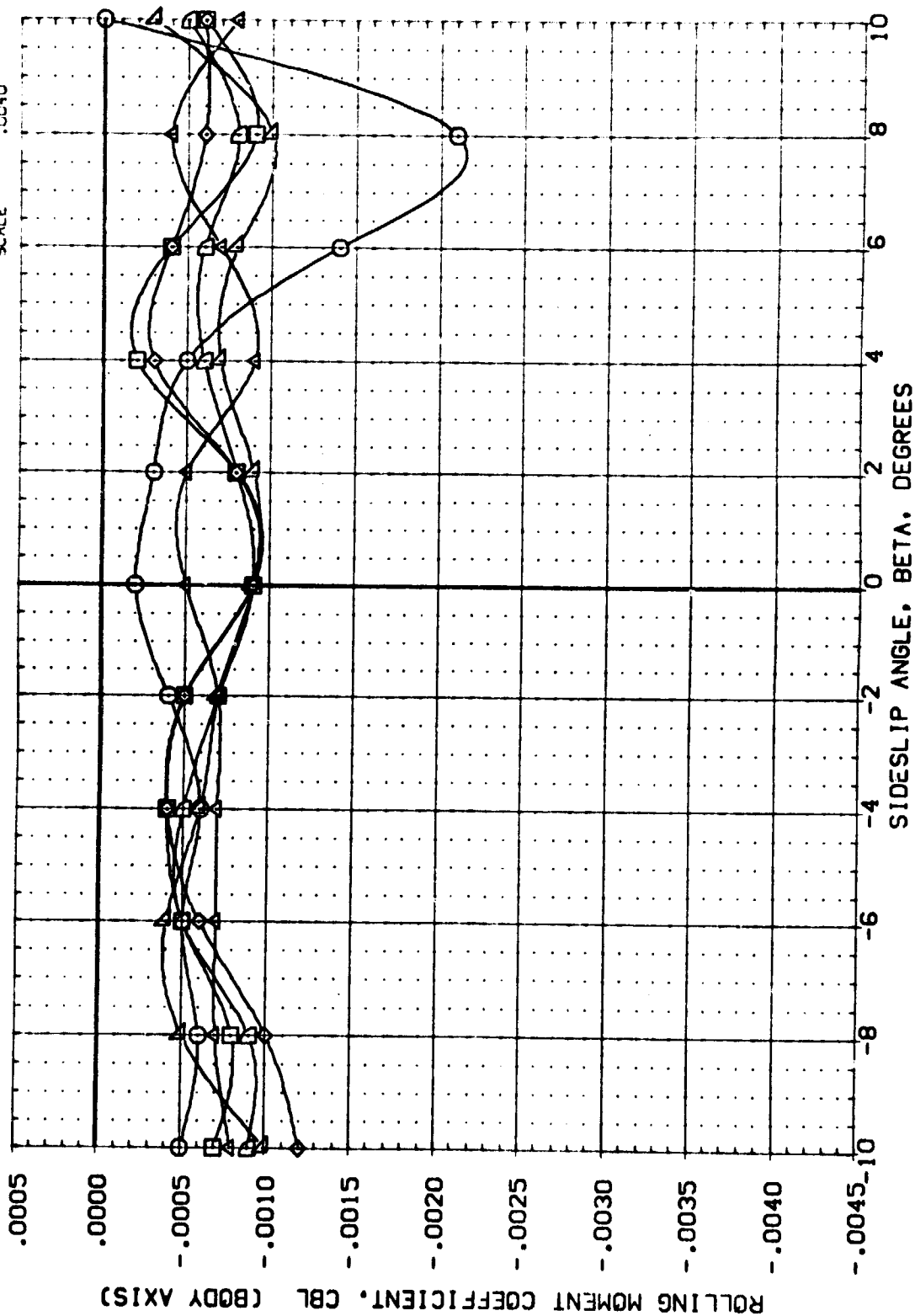
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SO. IN
(A83T15)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN.
(A83T18)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.24

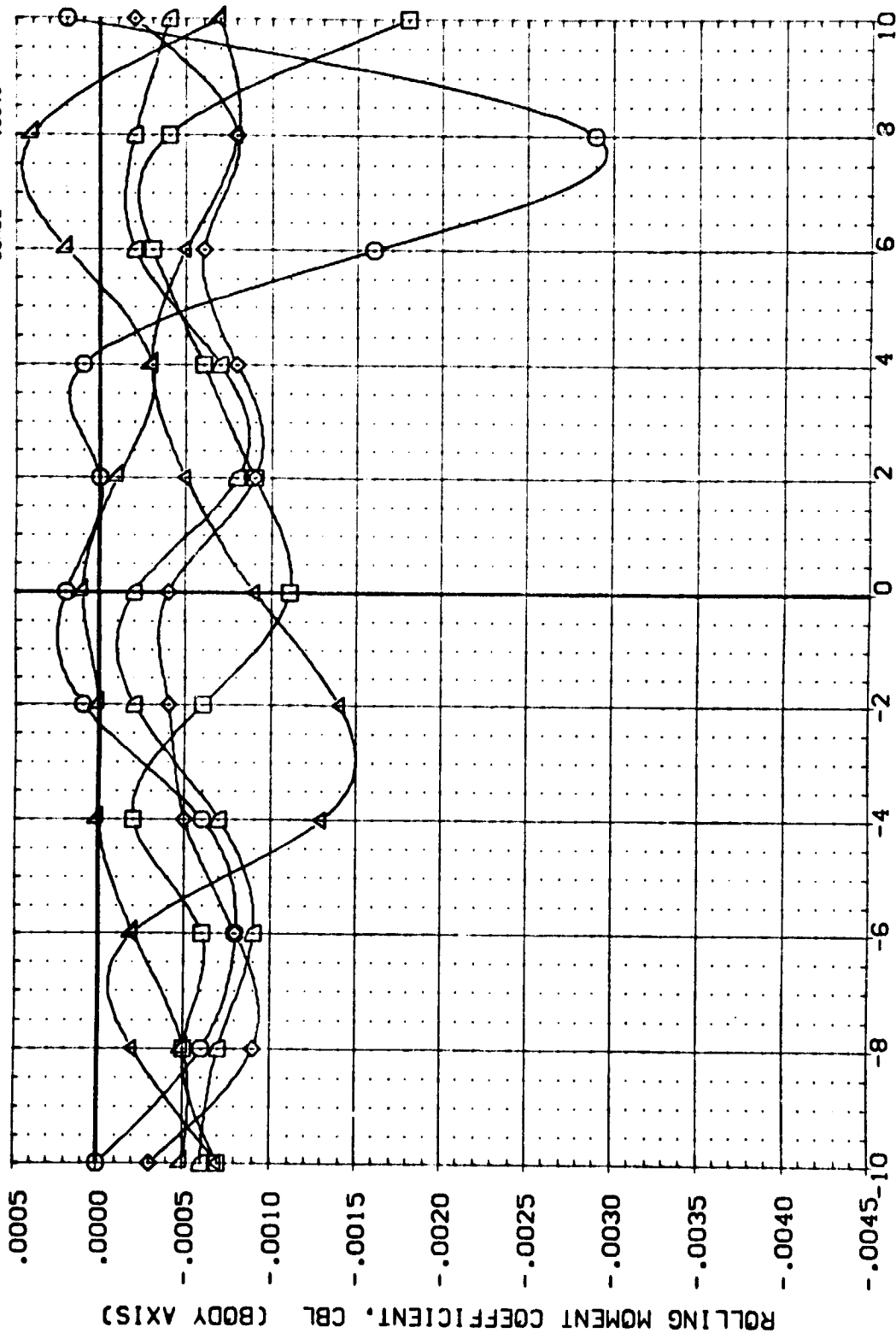
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T15)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	.500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	1.500	.140	BREF 2.5490 IN.
(A83T17)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	.500	.140	VMRP .0000 IN.
(A83T18)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	.500	.140	ZMRP .0000 IN.
(A83T19)	MSFC 570((IA3IF)(T9)/(03)/(S3/2)/(S3/2))	-5.000	1.500	.140	SCALE .0010



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(D)MACH = 1.47

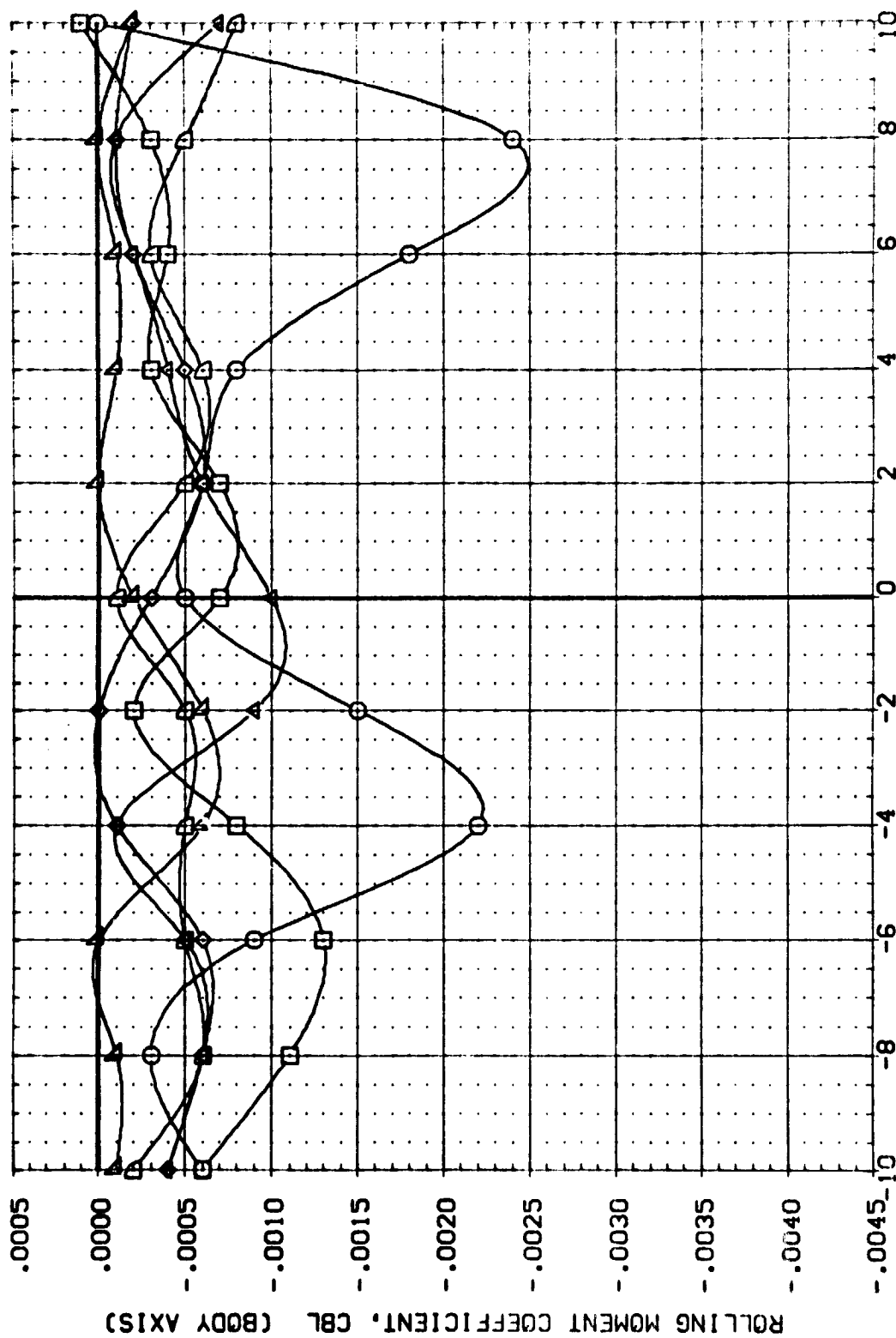
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION
(A83114)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	SREF 6.1980 IN.
(A83115)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	LREF 5.3130 IN.
(A83116)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	BREF 5.3130 IN.
(A83117)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	XMRP 2.5490 IN.
(A83118)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	YMRP .0000 IN.
(A83119)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2))	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T15)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
(A83T17)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN.
(A83T18)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN.
(A83T19)	MSFC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 3.48

REFERENCE INFORMATION

SREF	6.1980	IN.
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	2.5450	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0040	

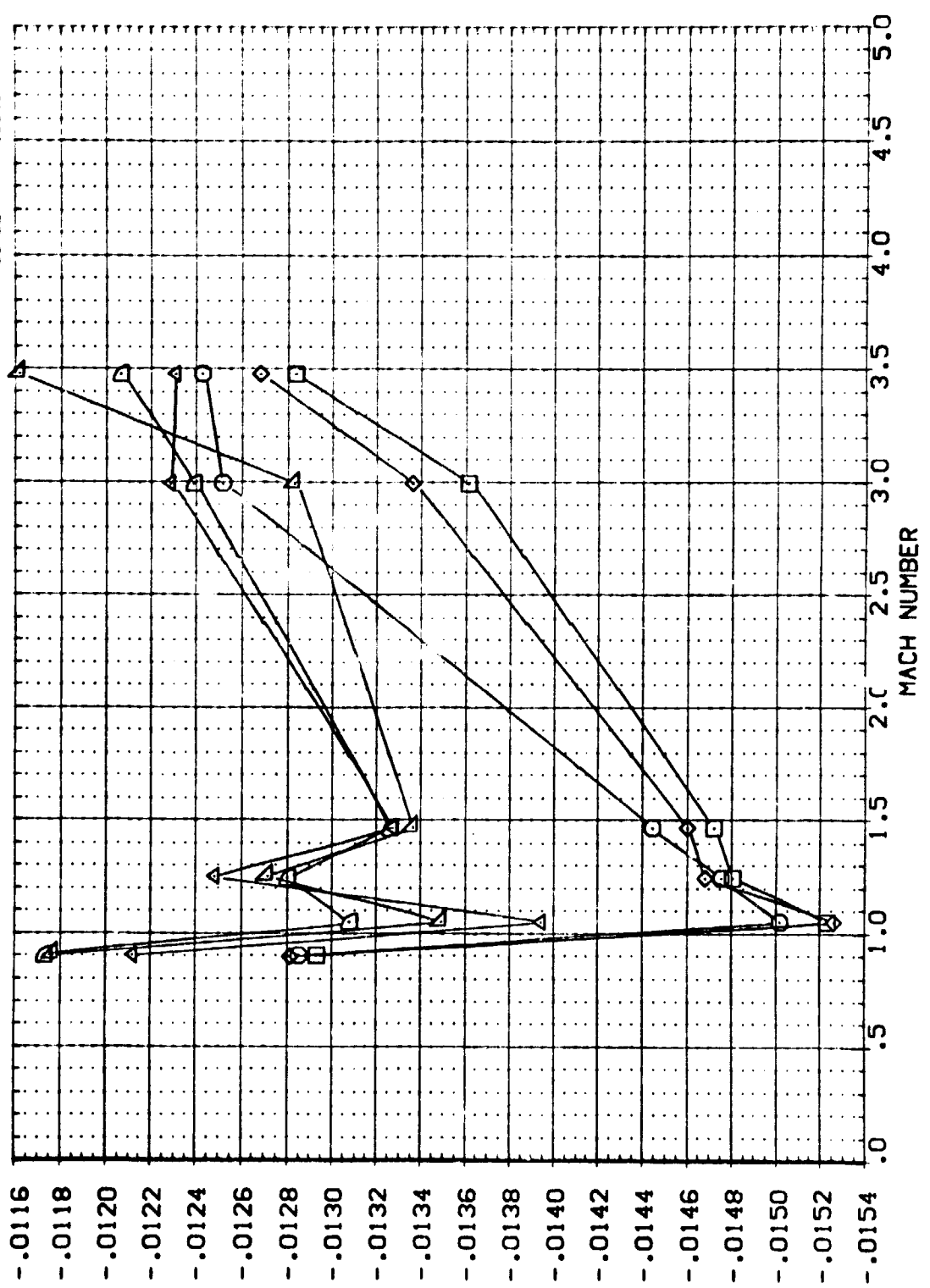
ALPHA ORBINC DELTAZ

-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140
-5.000	-500	.140

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83T14)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)
(A83T15)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)
(A83T16)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)
(A83T17)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)
(A83T18)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)
(A83T19)	MSFC 570(I A3IF)(T9)/(S3/2)/(S3/2)

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[A83114]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])
[A83115]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])
[A83116]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])
[A83117]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])
[A83118]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])
[A83119]	MSFC 570([A31F])(T9)/([03])/([S3/2])/([S3/2])

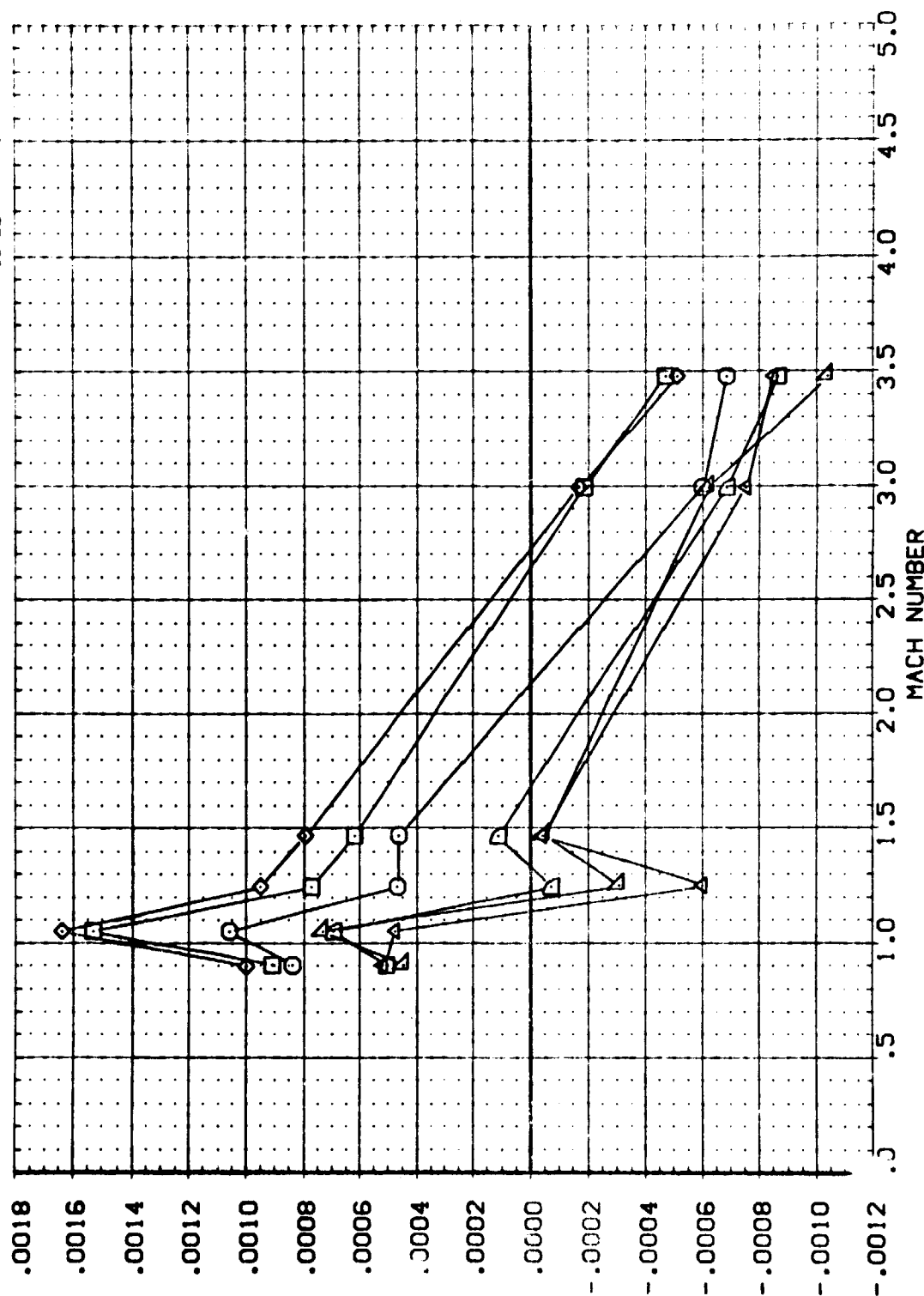
REFERENCE INFORMATION

SREF	6.1980	SO	IN
LREF	5.3130	IN	IN
BREF	5.3130	IN	IN
XMRP	2.5450	IN	IN
YMRP	.0000	IN	IN
ZMRP	.0000	IN	IN
SCALE	.0040		

ALPHA ORBINC DELTA Z

-5.000	-.500	.140
-5.000	-.500	.140
-5.000	-.500	.140
-5.000	-.500	.140
-5.000	-.500	.140
-5.000	-.500	.140

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

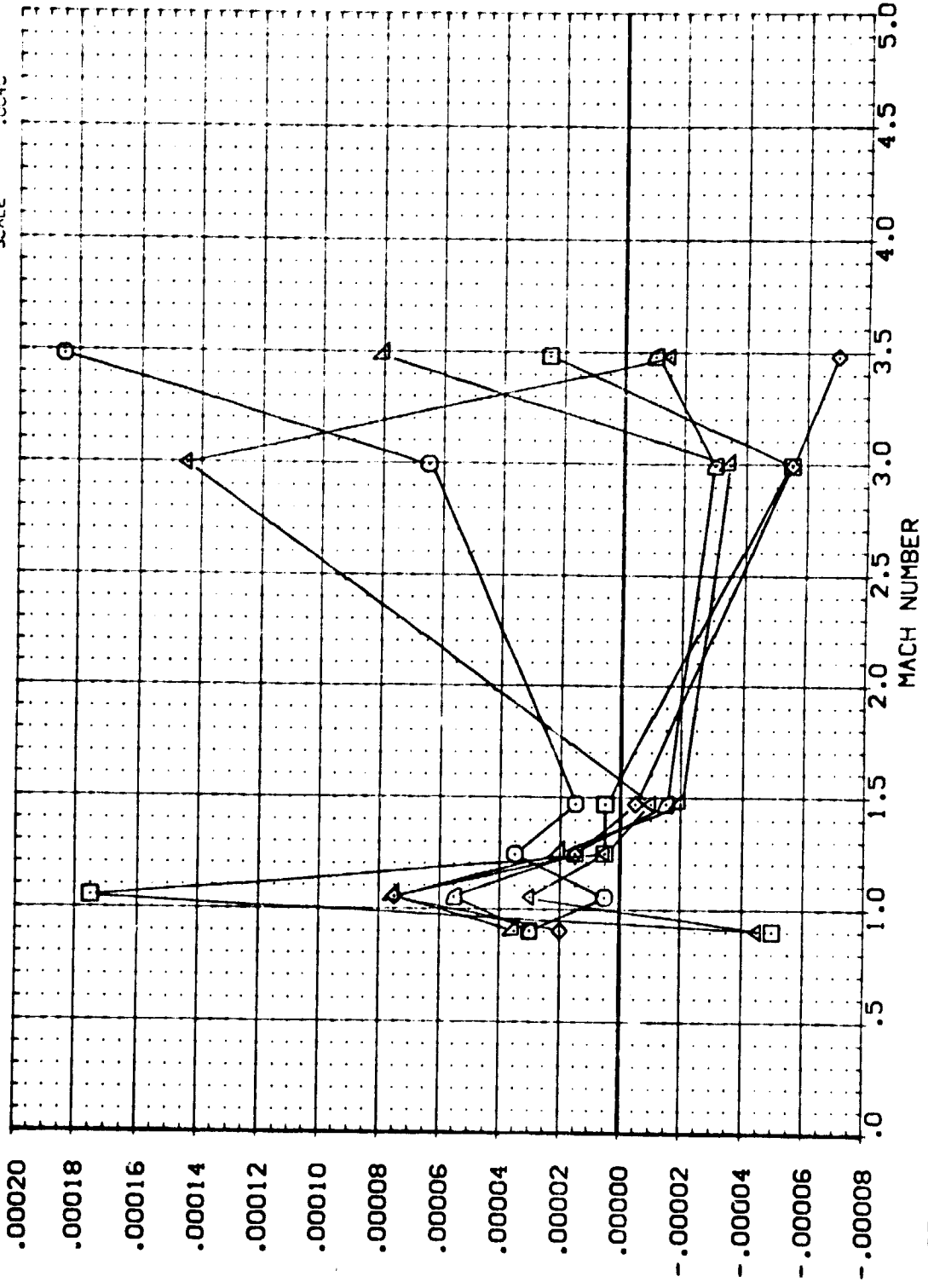


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/([S3/2])/([S3/2])

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA ORB INC DELTA Z REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORB INC	DELTA Z	REFERENCE INFORMATION
(A83T14)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	SREF 6.1980 SQ. IN
(A83T15)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	500	.140	LREF 5.3130 IN.
(A83T16)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	1500	.140	BREF 2.5490 IN.
(A83T17)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	-500	.140	YMRP .0000
(A83T18)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	500	.140	ZMRP .0000
(A83T19)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)	-5.000	1500	.140	SCALE .0040

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)

(A83T07)

SYMBOL MACH ALPHA DELTA Z X-SRB SPACER SPAGAP

PARAMETRIC VALUES

CONF IG 200.000

RUDER .000

DRB INC .500

SPADIA .000

SPACER .000

SPAGAP .000

CONF IG 200.000

RUDER .000

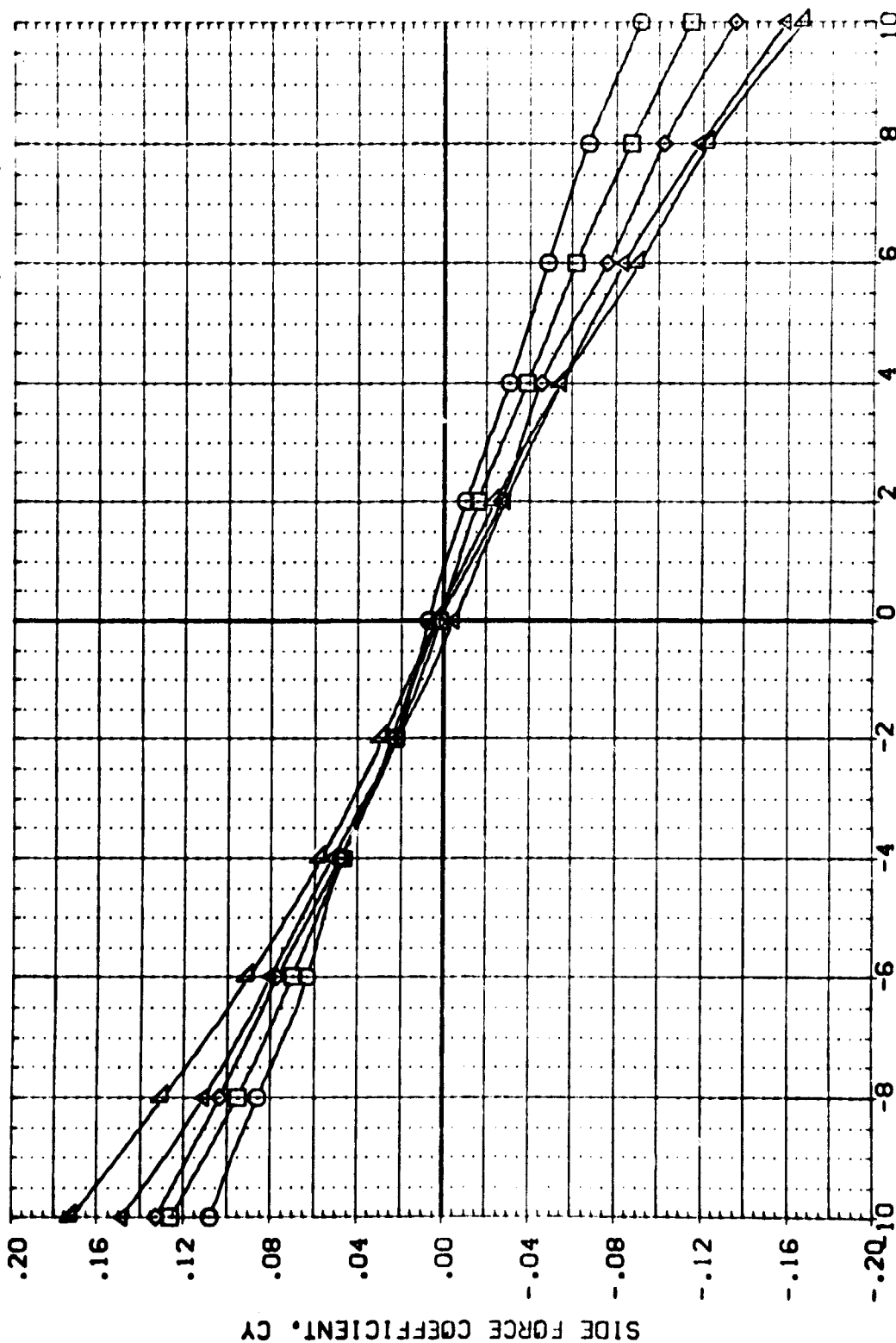
DRB INC .500

SPADIA .000

SPACER .000

REFERENCE INFORMATION

SREF 6.1980
LREF 5.3130
BRL 5.3130
XMRP 2.5450
YMRP .0000
ZMRP .0000
SCALE .0040

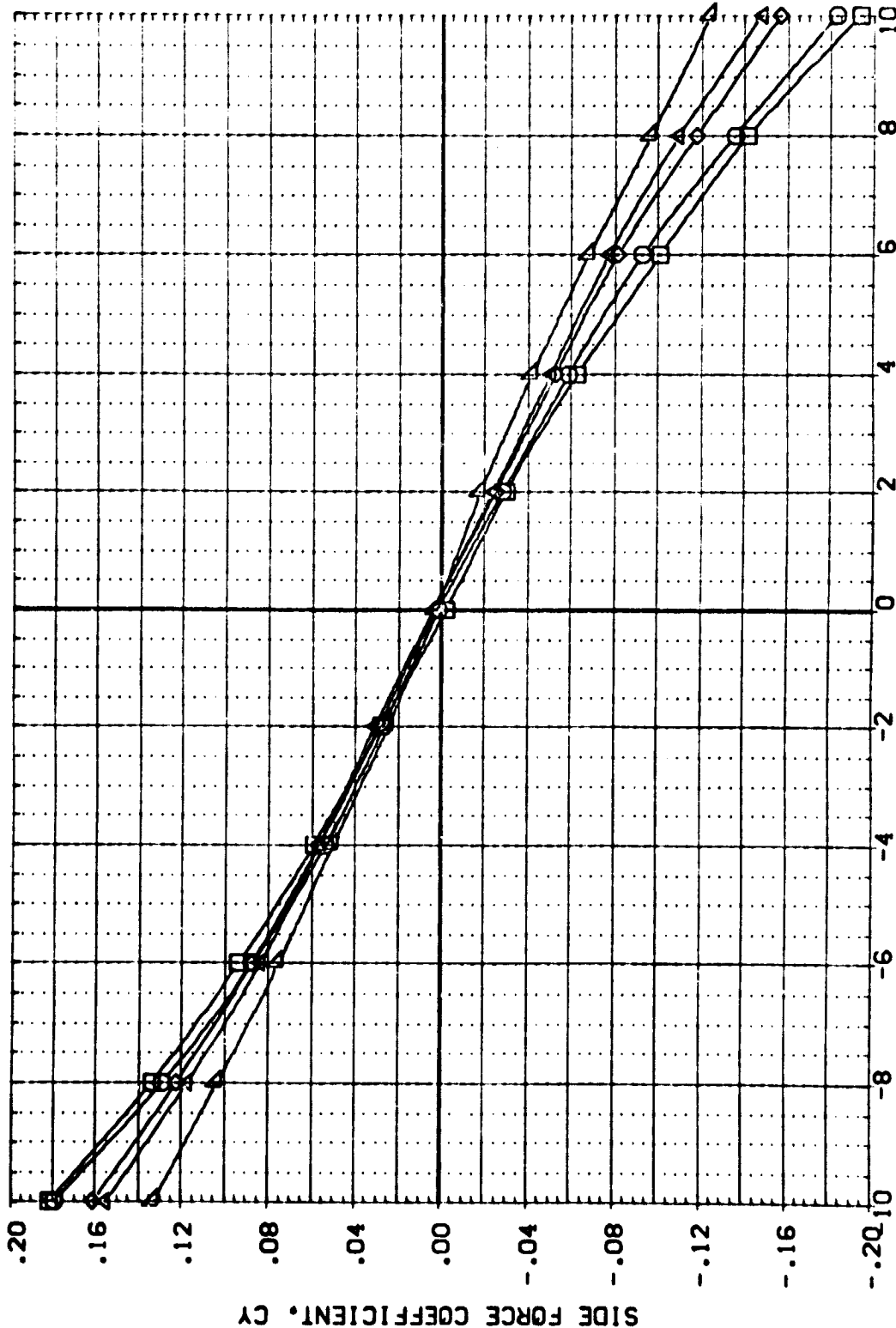


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)

(A83T07)

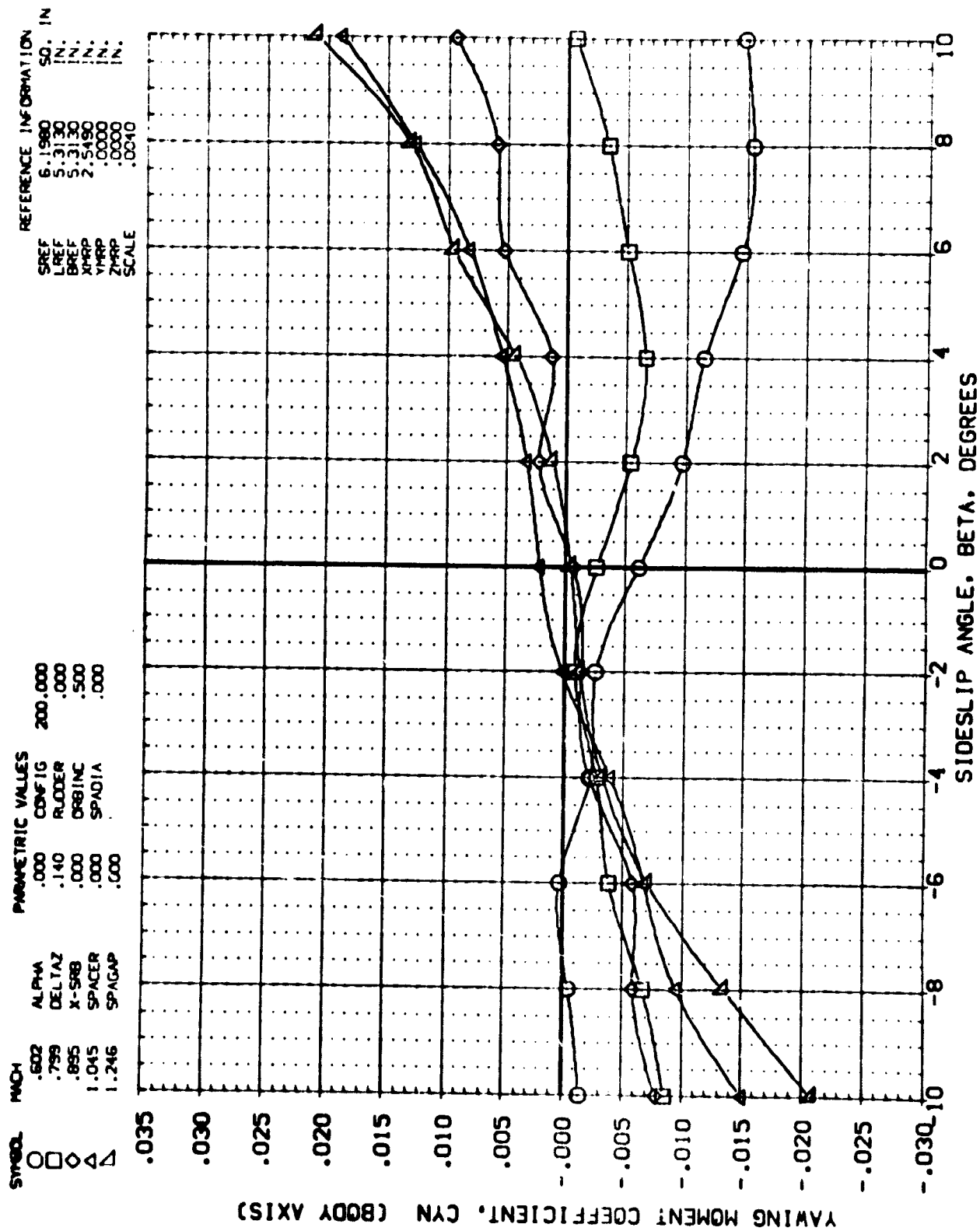
SYMBOL	MACH	PARAMETRIC VALUES					REFERENCE INFORMATION				
		ALPHA	DELTA Z	CONFIG	RUDDER	ORBITAL	SREF	LRREF	BRREF	YMRP	SCALE
□	1.465	.000	.140	200.000	.000	.000	6.1980	5.3130	5.3130	.0000	.0040
◇	1.983	.000	.140	.500	.000	.000	6.1980	5.3130	5.3130	.0000	.0040
△	2.990	.000	.140	.500	.000	.000	6.1980	5.3130	5.3130	.0000	.0040
△	3.490	.000	.140	.500	.000	.000	6.1980	5.3130	5.3130	.0000	.0040
△	4.960	.000	.140	.500	.000	.000	6.1980	5.3130	5.3130	.0000	.0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)

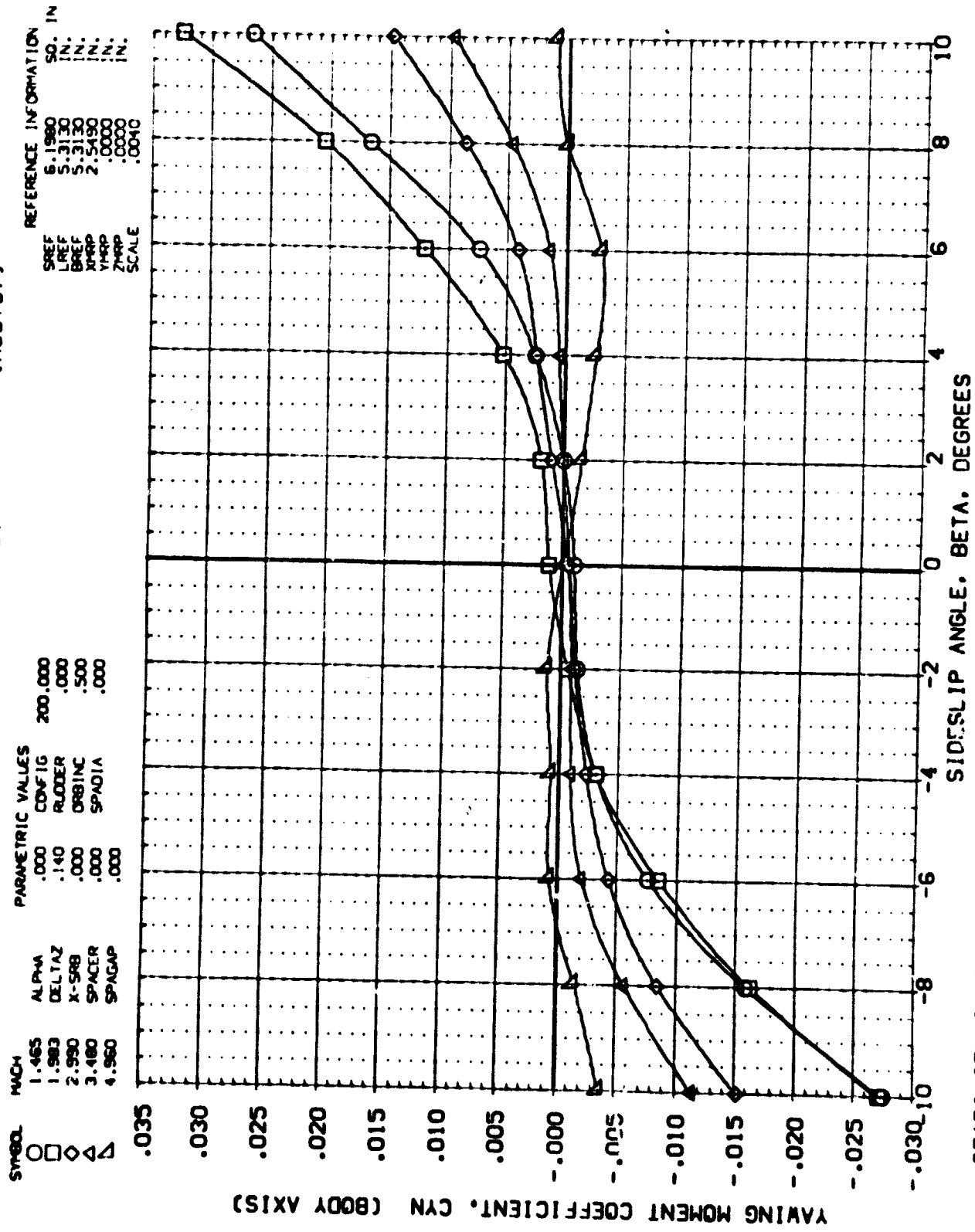
(A83T07)



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

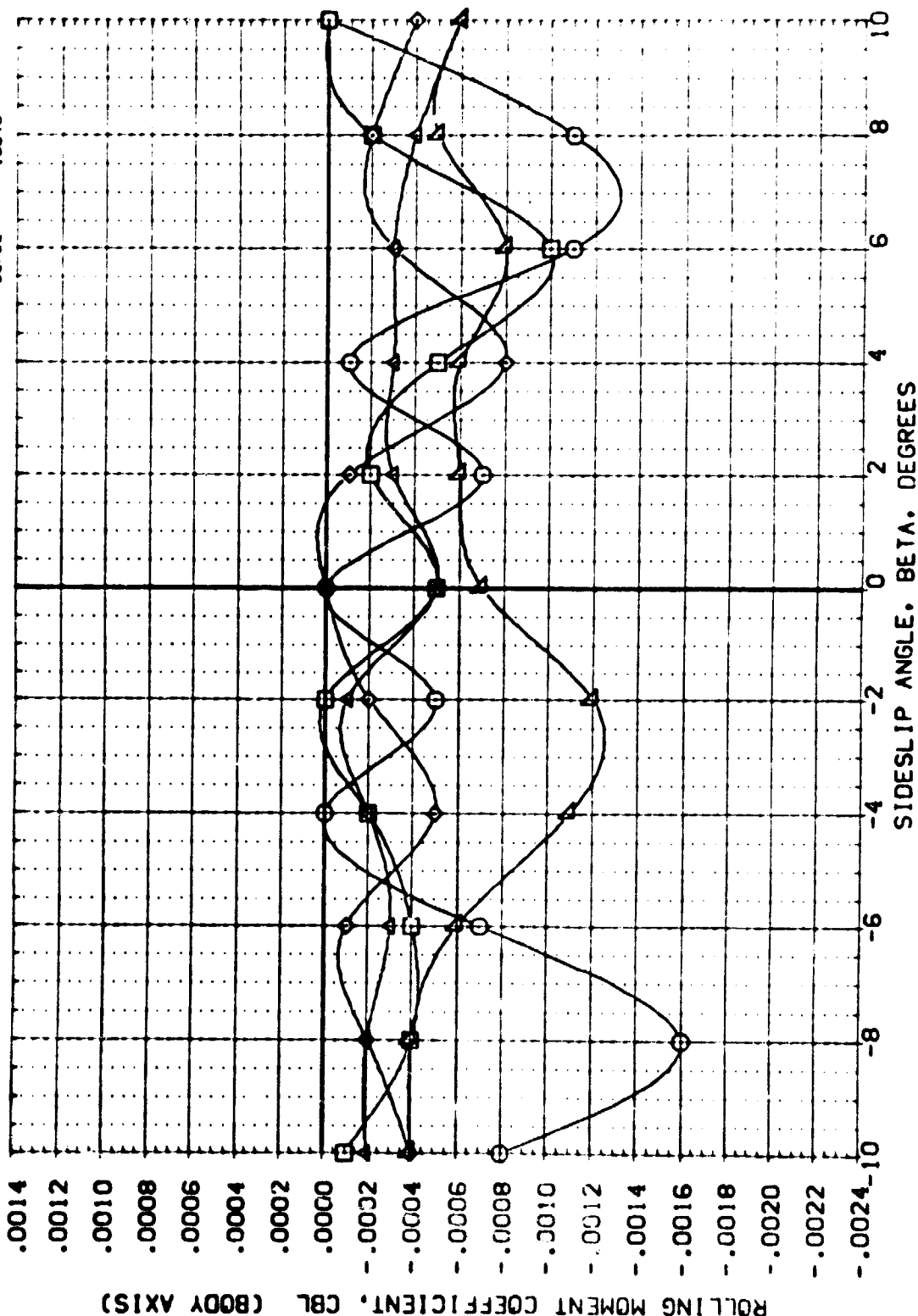
(A83T07)



MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)

(A83T07)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.602	ALPHA .000	SREF 6.1980
□	.799	DELTAZ .140	LREF 5.3130
◇	.895	X-SRB .000	BREF 5.3130
△	1.045	SPACER .000	X-SP 2.5490
	1.246	SPADIA .000	YMRP .0000
		SPAGAP .000	ZMRP .0000
			SCALE .0040

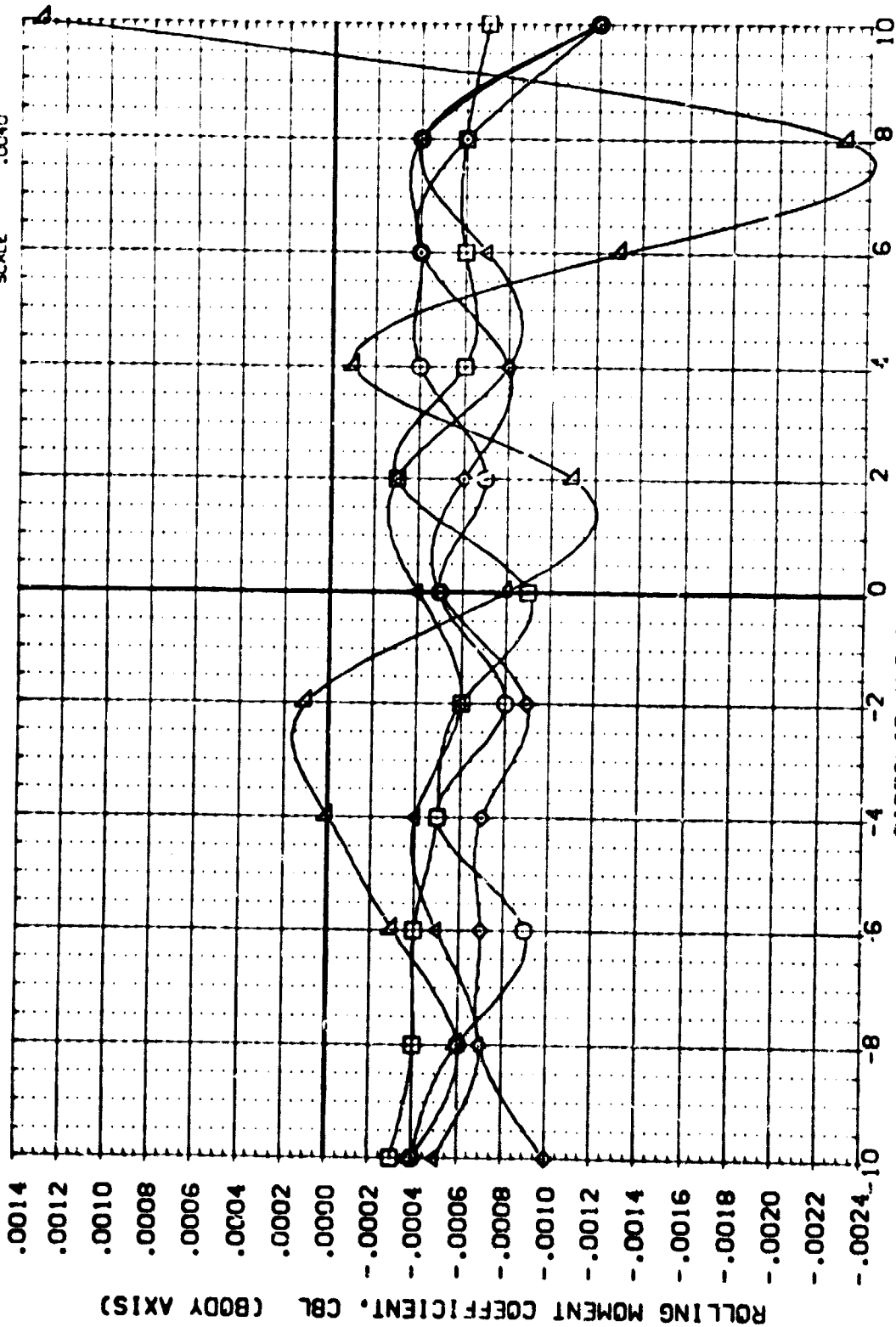


STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(A83T07)

SYMBOL	NACH	ALPHA	DELTA Z	PARAMETRIC VALUES	CONF IG	RUDDER	038 INC	SPADIA	SCALE	REFERENCE INFORMATION	SO: IN
□	1.465			.000	200.000	.000	.000	.000	.0040	SREF	6.1980
◇	1.983			.140		.000	.500	.000		LREF	5.3130
△	2.950			.000		.000	.500	.000		BREF	5.3130
▽	3.480			.000		.000	.500	.000		X-MRP	2.5450
△	4.960			.000		.000	.500	.000		Y-MRP	.0000
				.000		.000	.500	.000		Z-MRP	.0000
				.000		.000	.500	.000		SCALE	.0040



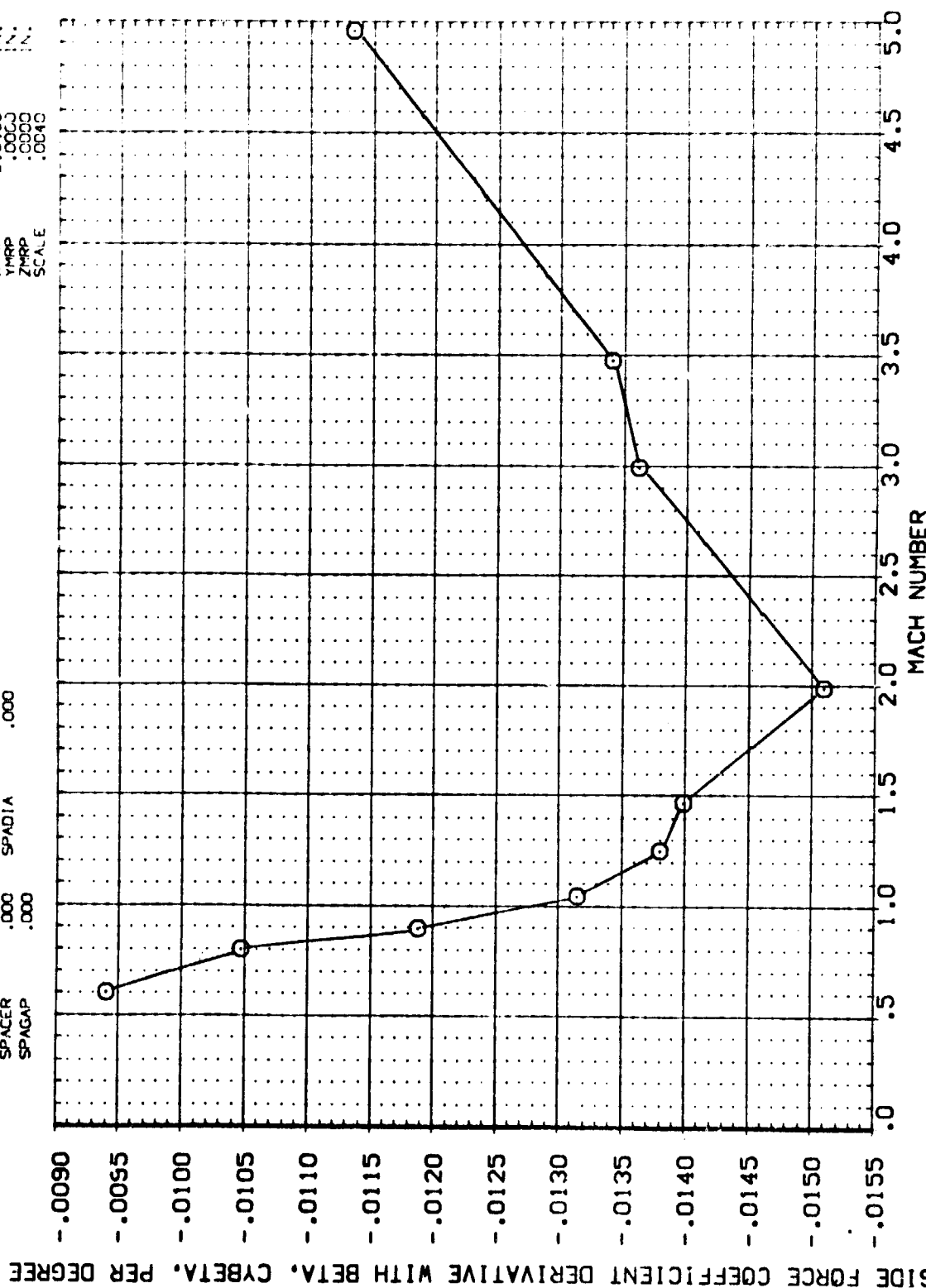
STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

(A83T07)

PARAMETRIC VALUES
 ALPHA .000 CONFIG 200.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBINC .500
 SPACER .000 SPADTA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

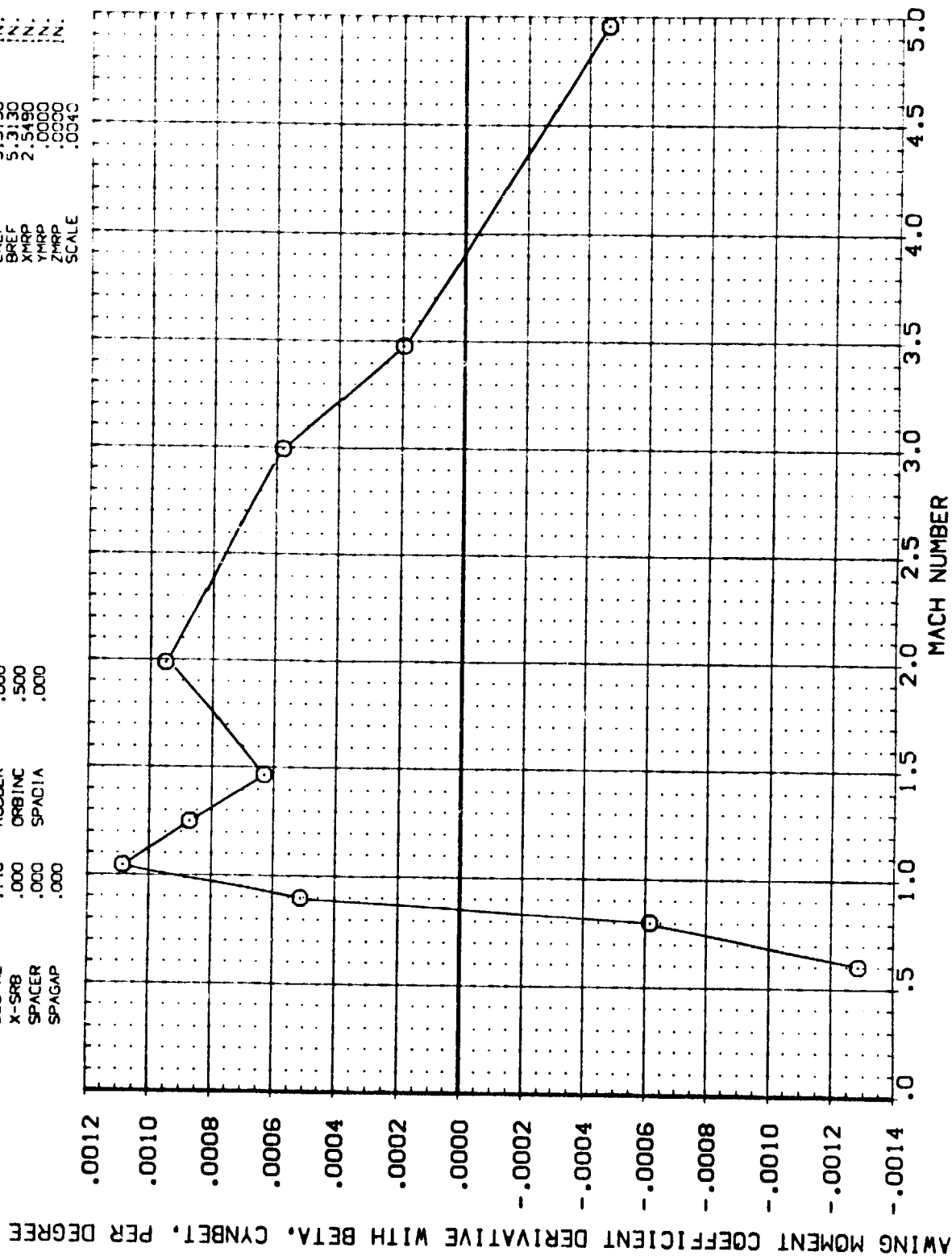
(A83T07)

PARAMETRIC VALUES

ALPHA	.000	CONF IG	200.000
DELTA Z	.140	RUDDER	.000
X-SRB	.000	ORBITAL	.500
SPACER	.000	SPACIA	.000
SPAGAP	.000		

REFERENCE INFORMATION

SREF	6.1980	SO.	IN
LREF	5.3130	IN.	N.
BREF	5.3130	IN.	N.
YMRP	2.5450	IN.	N.
ZMRP	.0000	IN.	N.
SCALE	.0340		



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

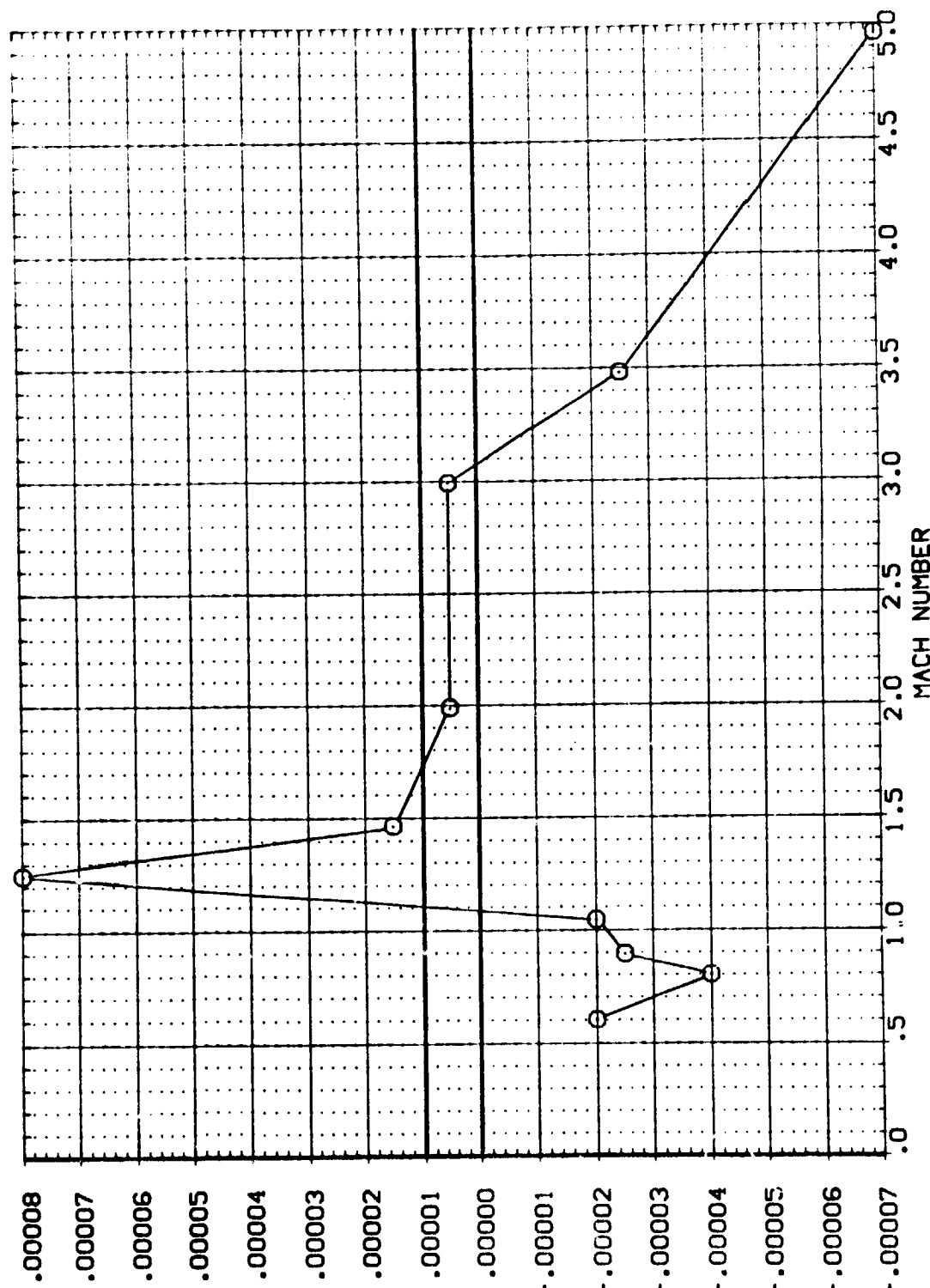
(A83T07)

MSFC 570(IA31F)(T9)/(03)/(S3/2)/(S3/2)

REFERENCE INFORMATION
SREF 6.1980 SQ. IN
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

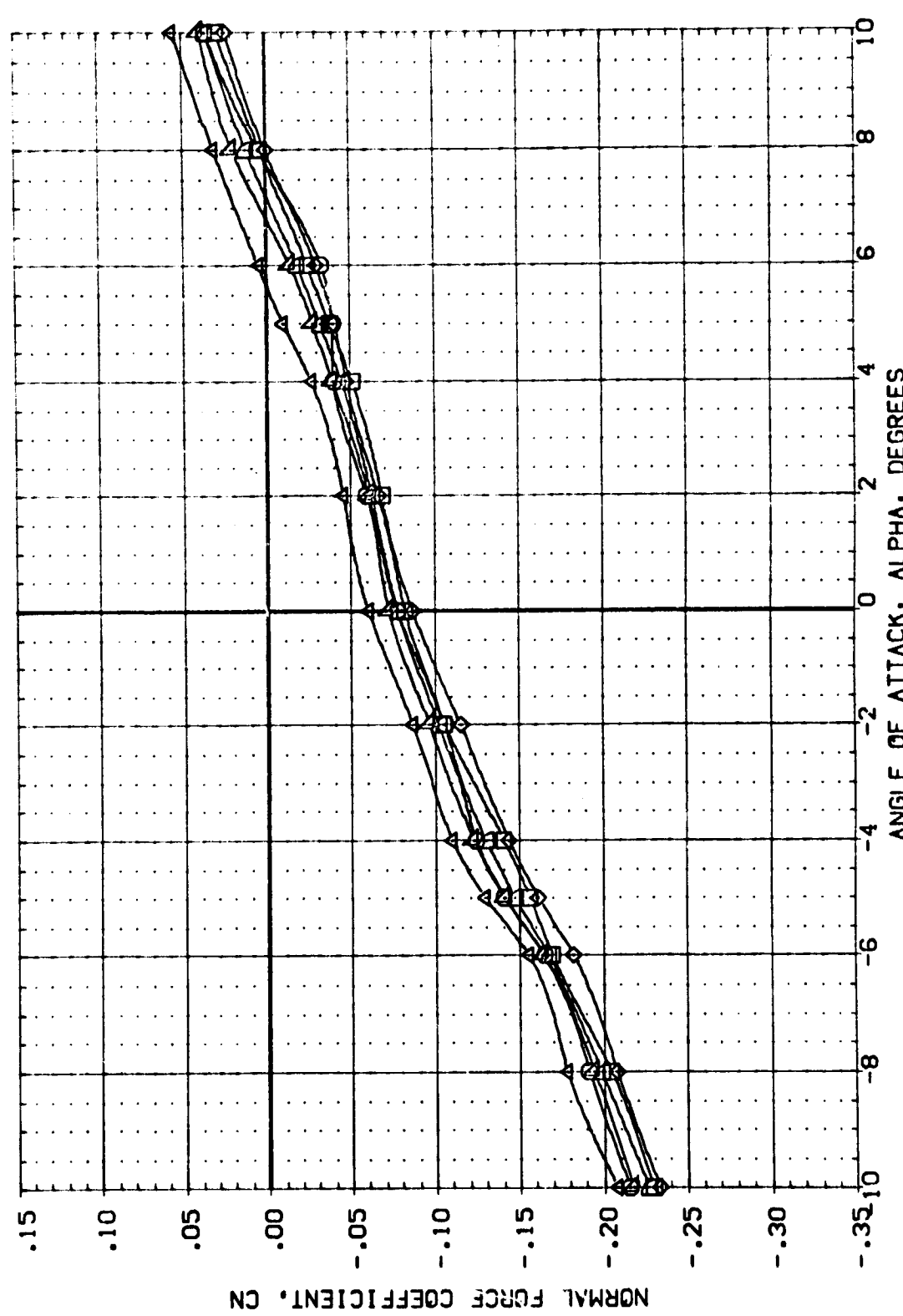
PARAMETRIC VALUES
ALPHA .000 CONFIG 200.000
DELTAZ .140 RUDDER .000
X-SRB .000 ORBINC .500
SPACER .000 SPADIA .000
SPAGAP .000

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE



STABILITY CHARACTERISTICS - (T9) IN PRESENCE OF (03)/(S3/2)/(S3/2)

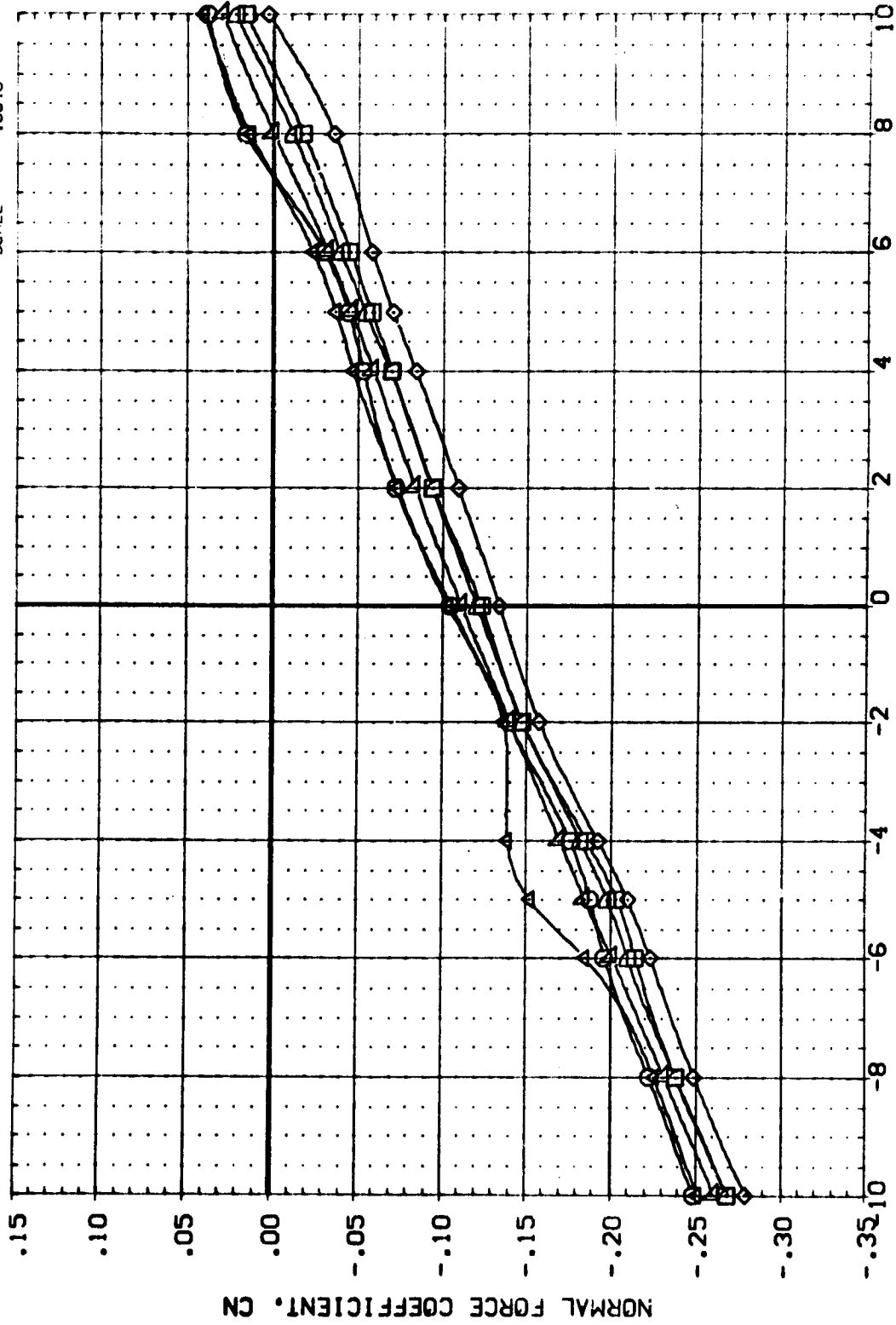
DATA SET SYMBOL	COEFFICIENT DESCRIPTION	BETA	ORIGIN	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	-.500	.140	SREF 6.1980 IN
(C83121)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83122)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83123)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN
(C83124)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(C83125)	MSFC 570(I A31F)(T9)(U5)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)

(A) MACH = .60

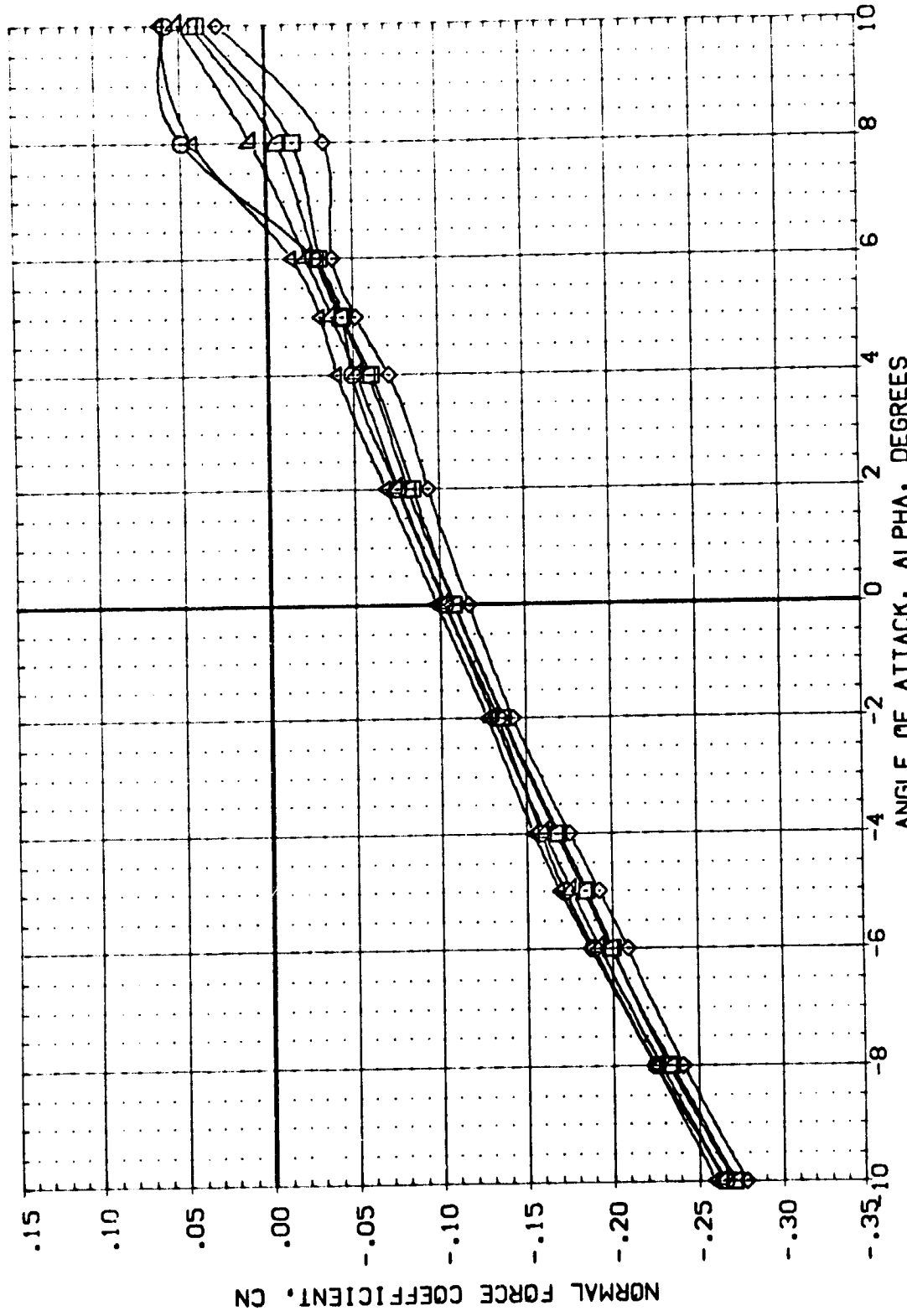
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83121)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83124)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83125)	MSFC 570(IA31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(B)MACH = .90

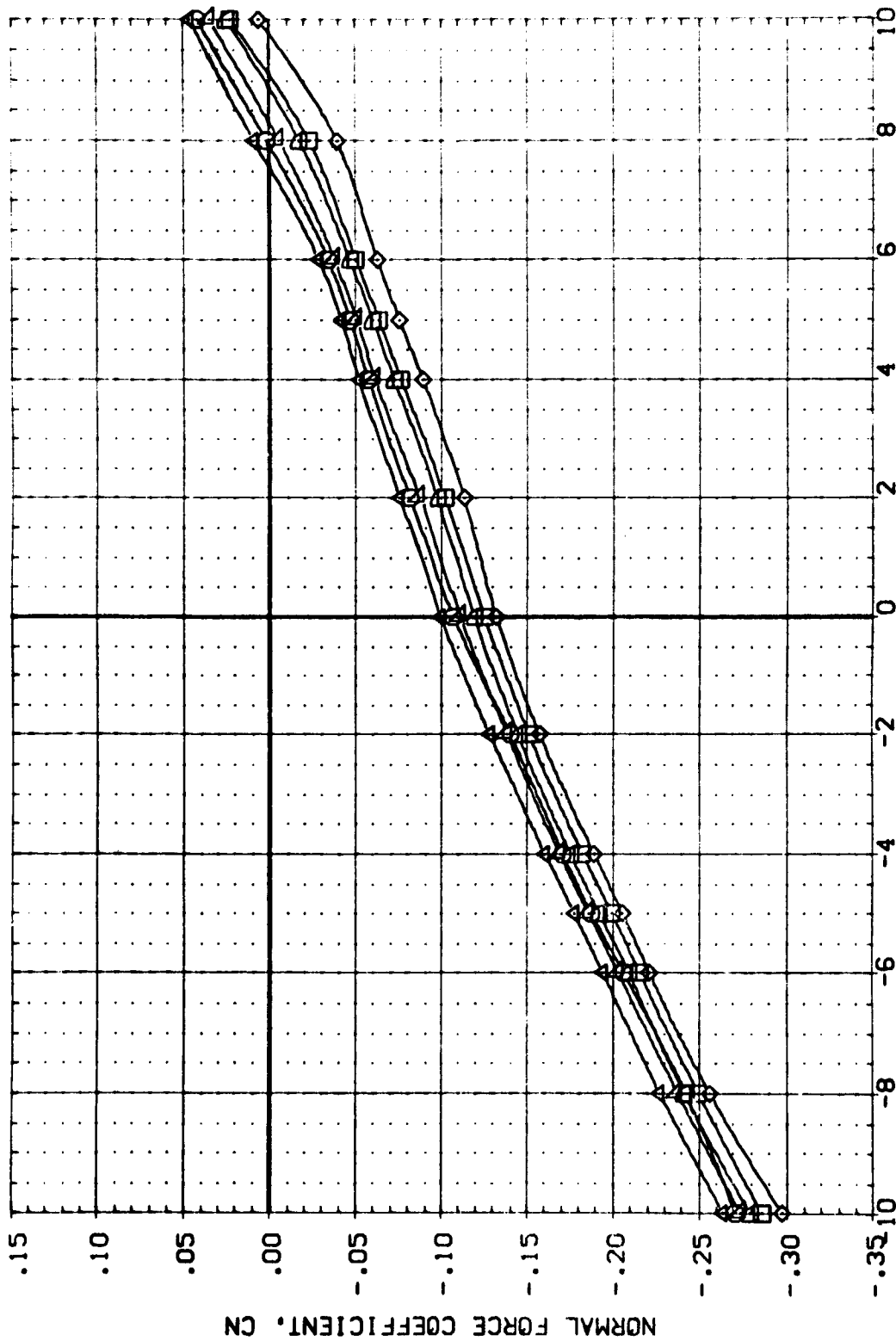
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83T21)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83T22)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T23)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5450
(C83T24)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	ZMRP .0000
(C83T25)	MSFC 570(I A3 I F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(C)MACH = 1.05

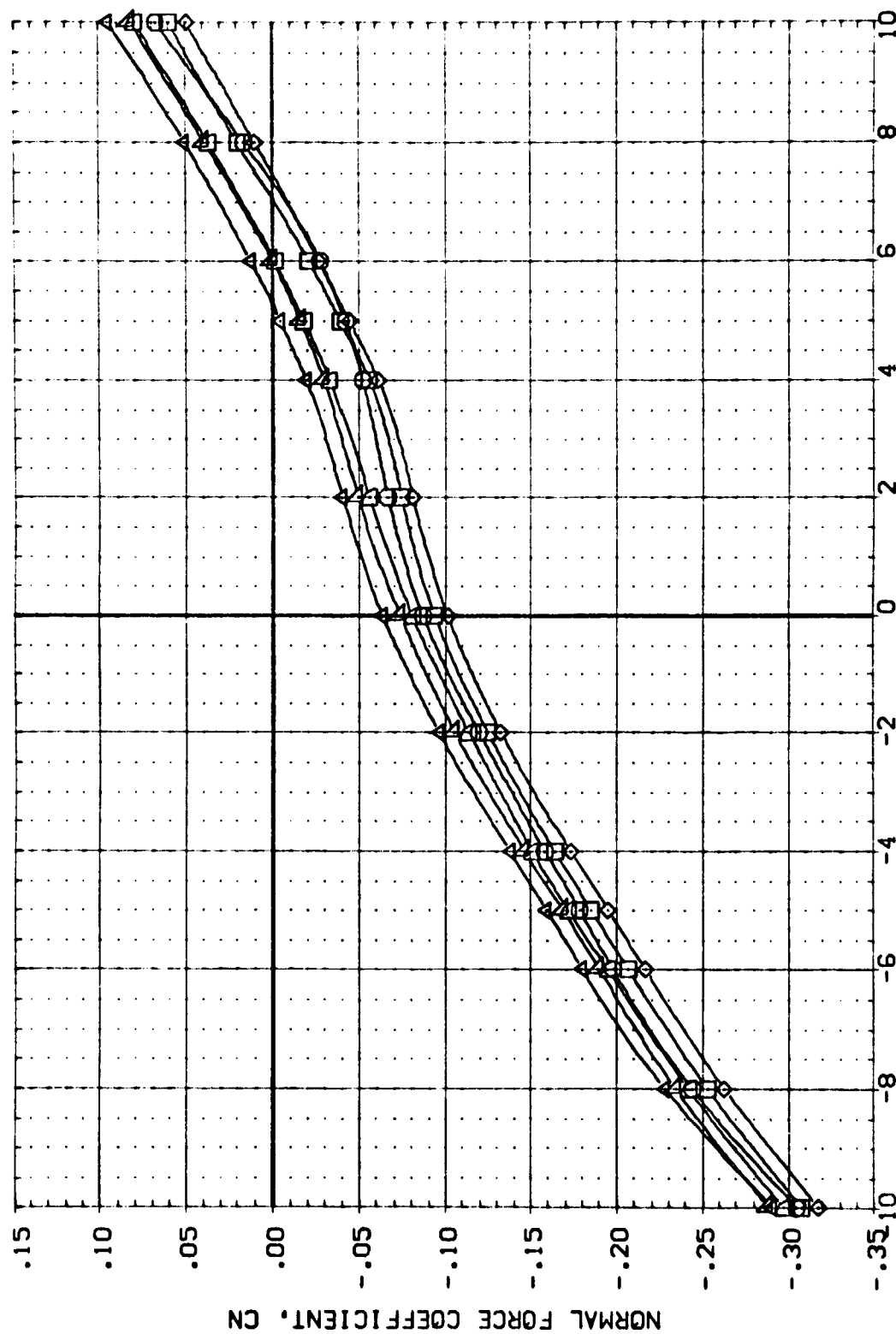
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SC. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 N. ZZZZ
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 2.5450
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP .0000
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(O)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 S3 IN
(C83121)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 N.
(C83122)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 N.
(C83123)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 N.
(C83124)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 N.
(C83125)	MSFC 570(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 N.
					SCALE .0040

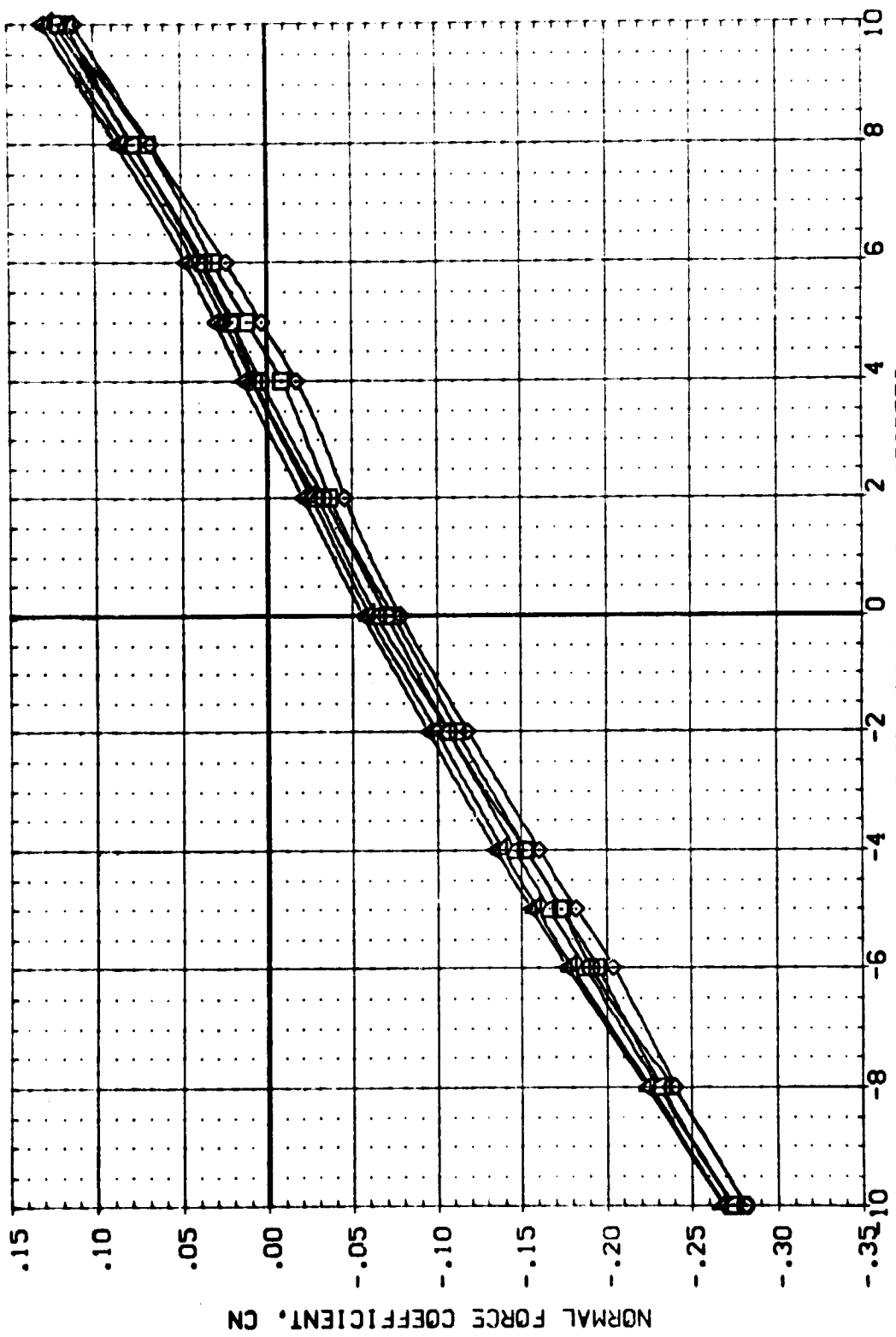


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(E)MACH = 1.97

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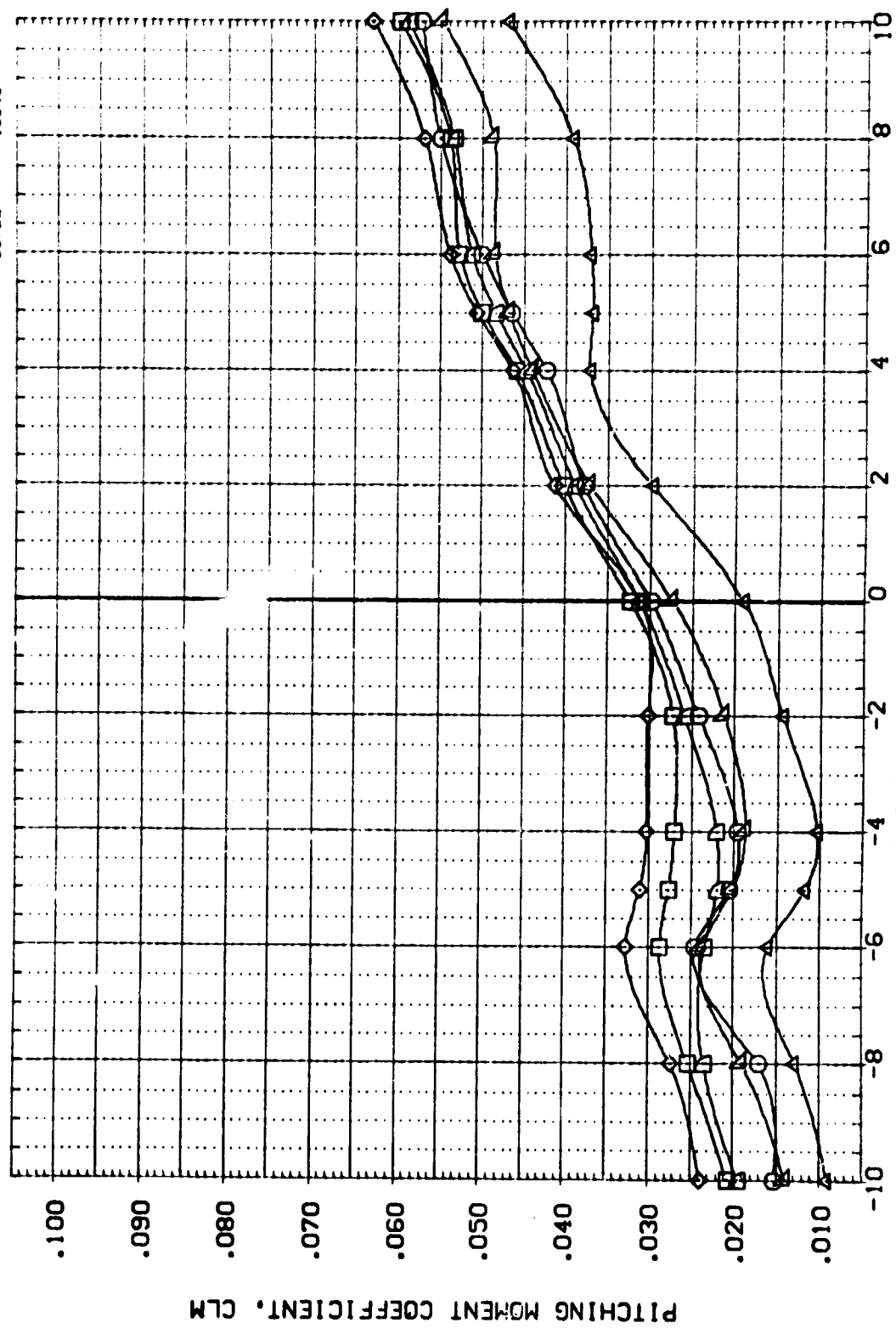
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(C83120)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	-.500	.140	SREF	6.1980
(C83121)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	.500	.140	LREF	3.3130
(C83122)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	1.500	.140	BREF	3.3130
(C83123)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	-.500	.280	YMRP	2.5490
(C83124)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	.500	.280	ZMRP	.0000
(C83125)	MSFC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)	.000	1.500	.280	SCALE	.0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (S3/2)/(S3/2)

(F)MACH = 3.48

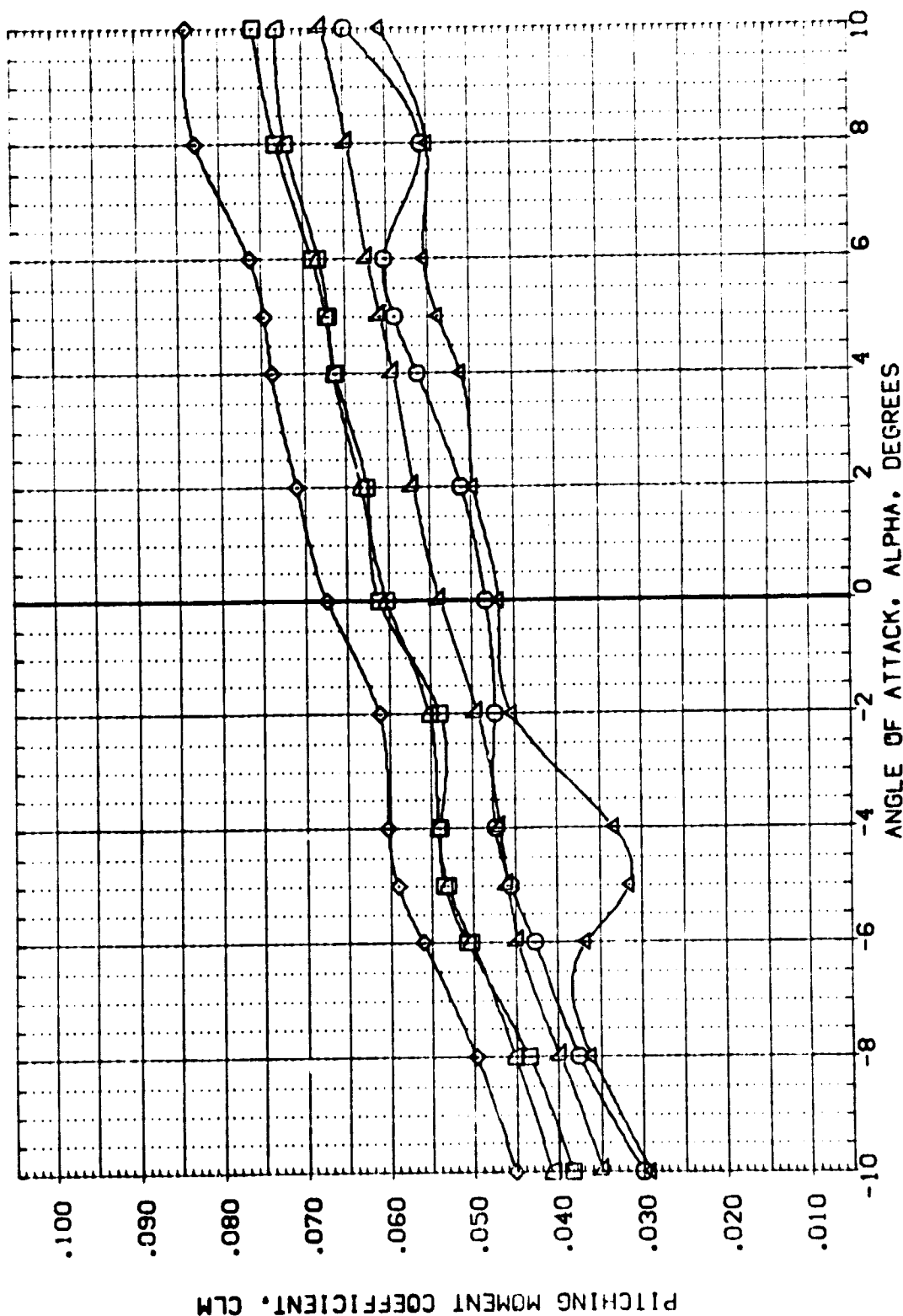
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	SREF 6.1980 SO. IN
(C83121)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.280	YMRP 2.5490 IN.
(C83124)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	-.500	.280	YMRP .0000 IN.
(C83125)	MSFC 570((A31F)(T9)(U5)/(S3/2)/(S3/2))	.000	1.500	.280	YMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

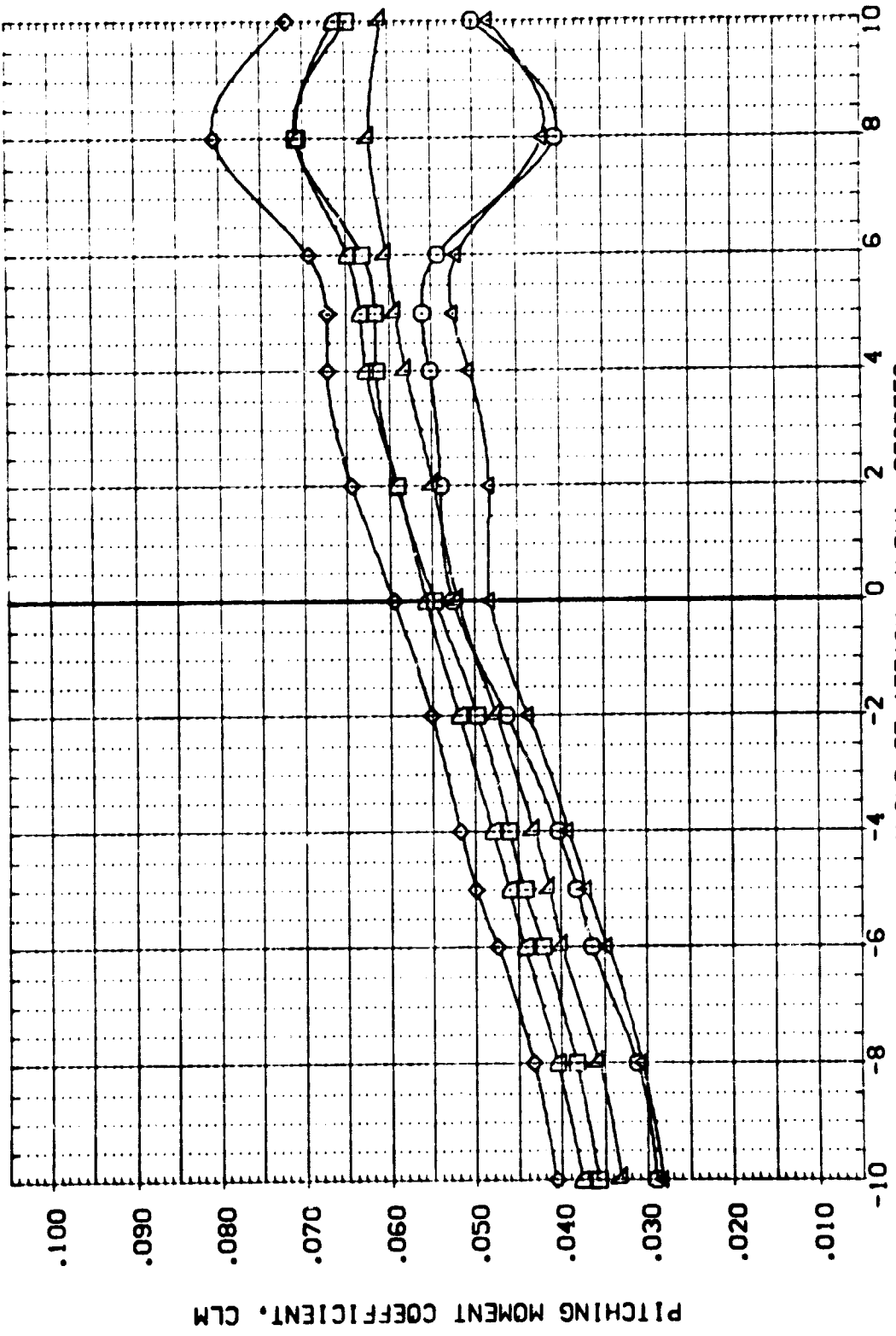
(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83T21)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T22)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83T23)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5480
(C83T24)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T25)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



(B)MACH = .90

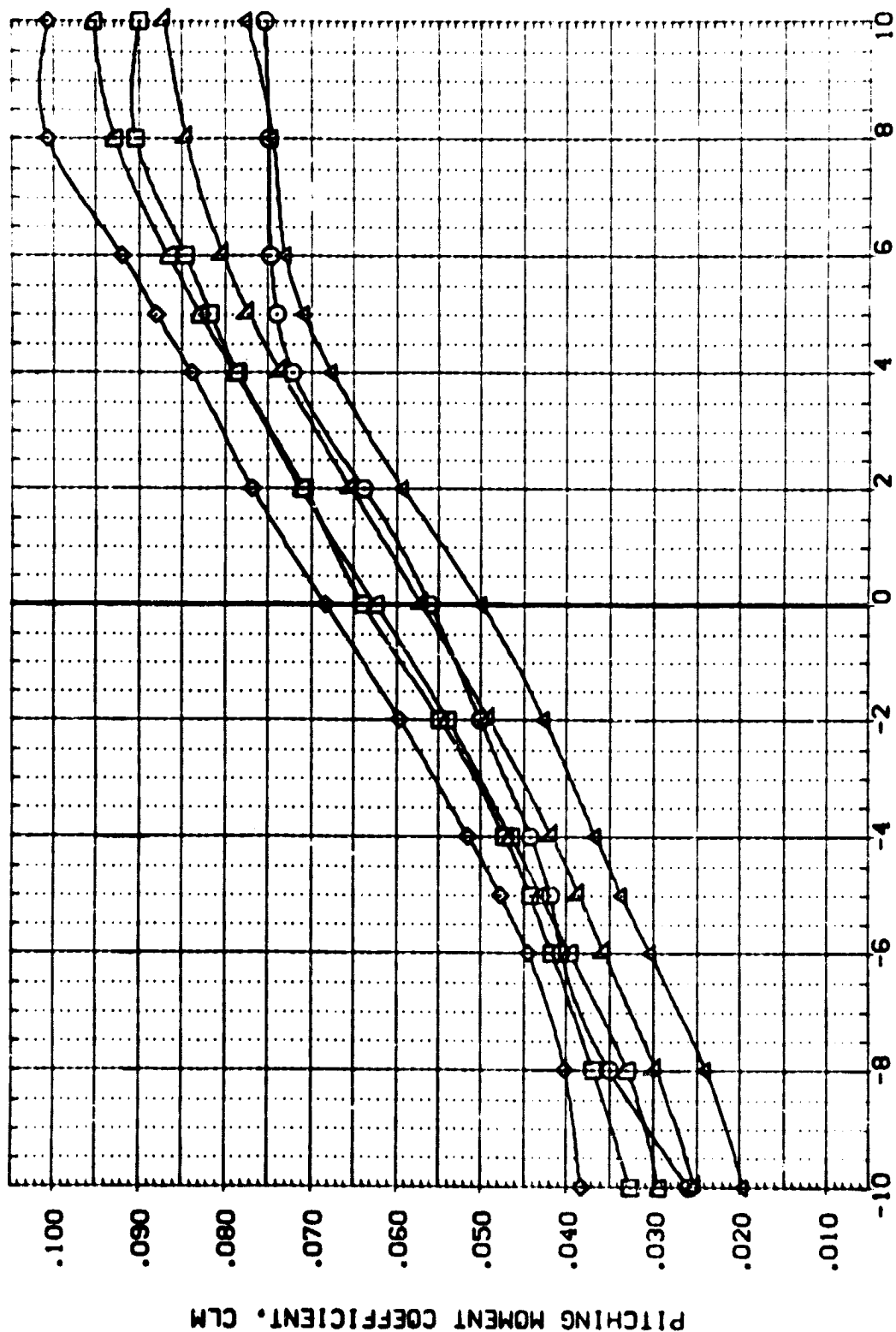
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(C03T20)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.140	SREF	5.1980
(C03T21)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.140	LREF	5.3130
(C03T22)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.140	BREF	5.3130
(C03T23)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.280	XMRP	2.5490
(C03T24)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.280	YMRP	.0000
(C03T25)	MSFC 570(IA3IF)(T9)(US)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - (T9)(US) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.05

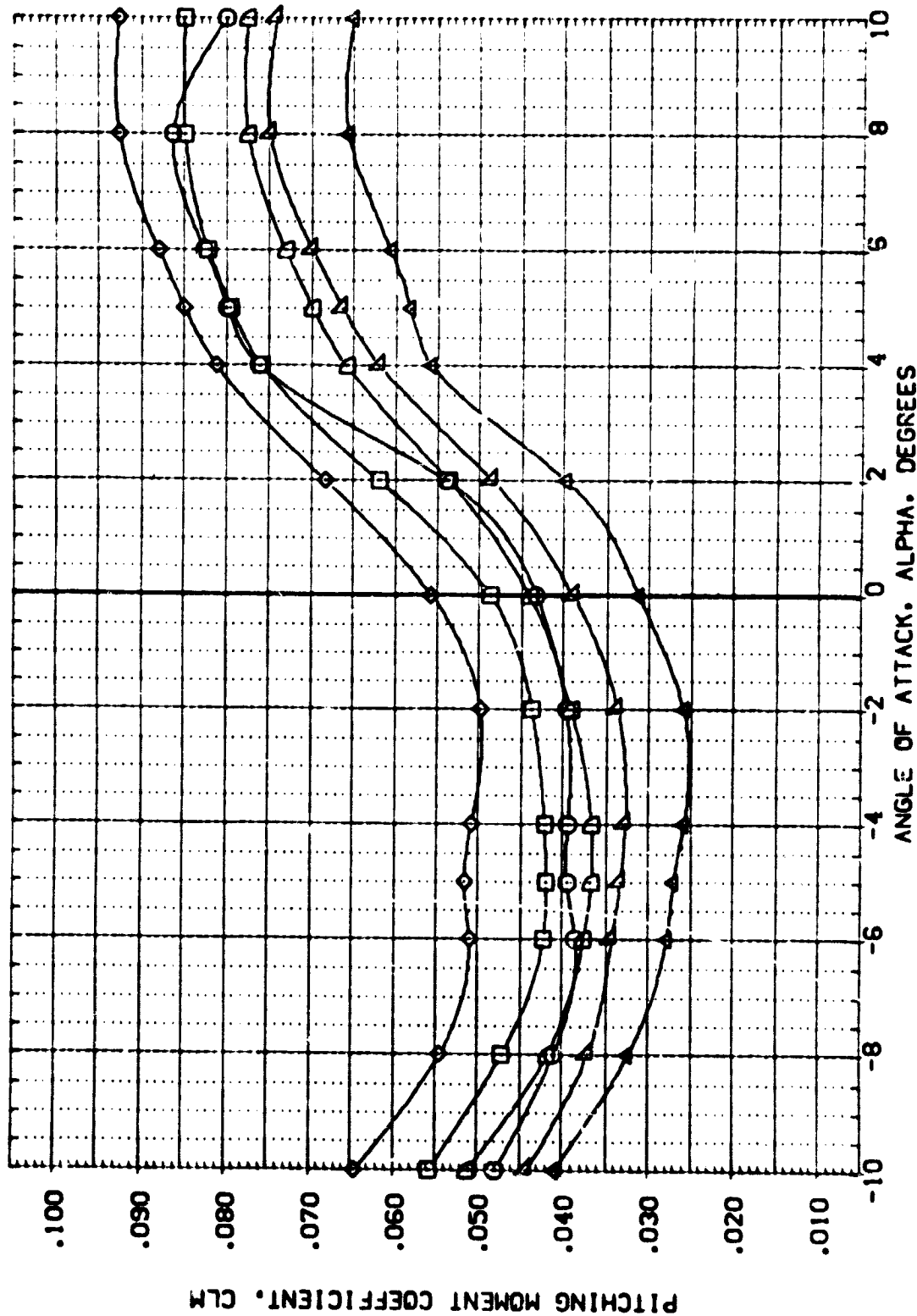
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C03120)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. 1
(C03121)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 SQ. 2
(C03122)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 SQ. 3
(C03123)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XREF 2.5490 SQ. 4
(C03124)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YREF .0000 SQ. 5
(C03125)	MSFC 570(I A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZREF .0000 SQ. 6
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.25

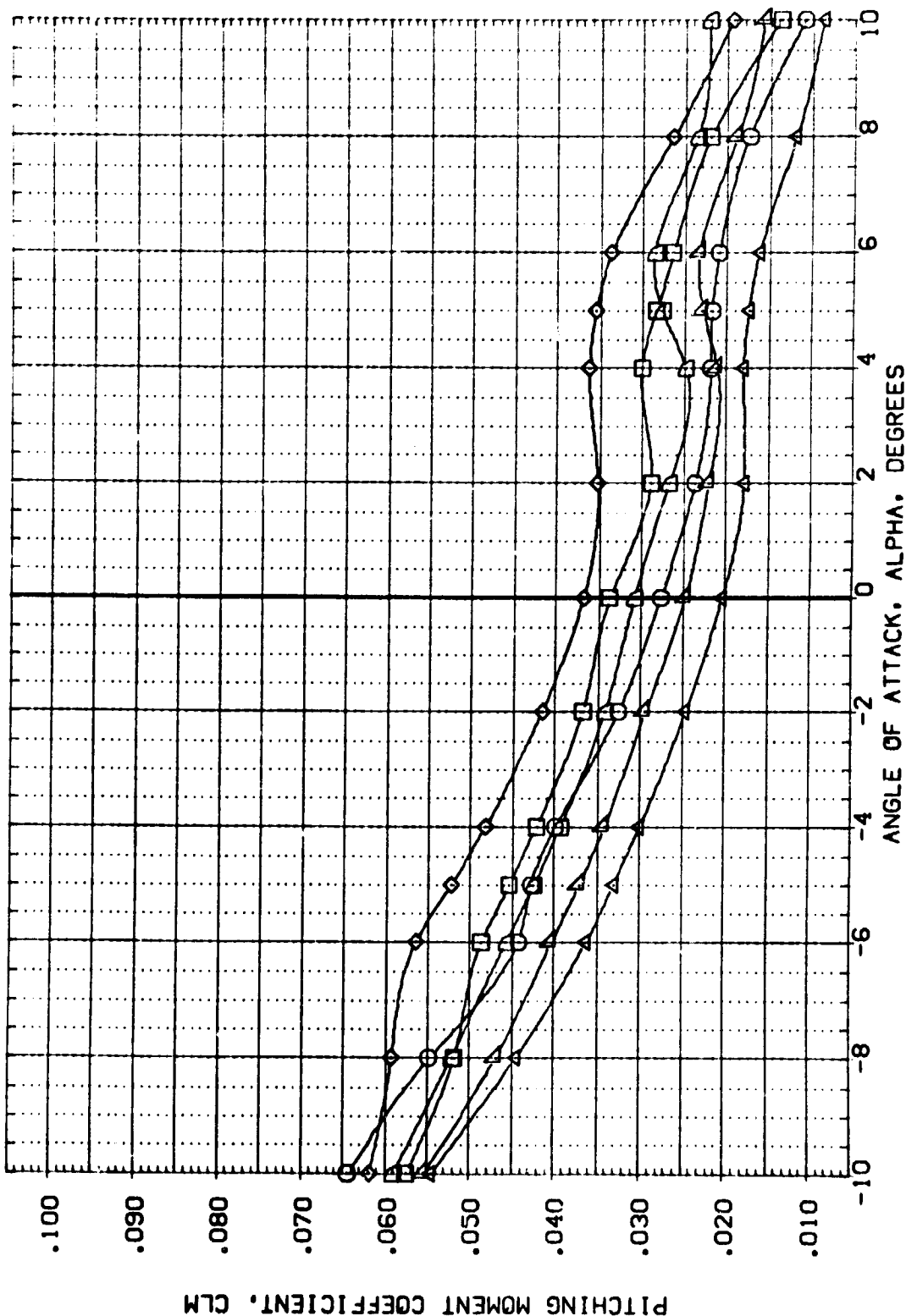
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C03120)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C03121)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C03122)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C03123)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	-.500	.280	YREF 2.5490
(C03124)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YREF 2.5490
(C03125)	M5C 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	YREF 2.5490
					SCALE .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.97

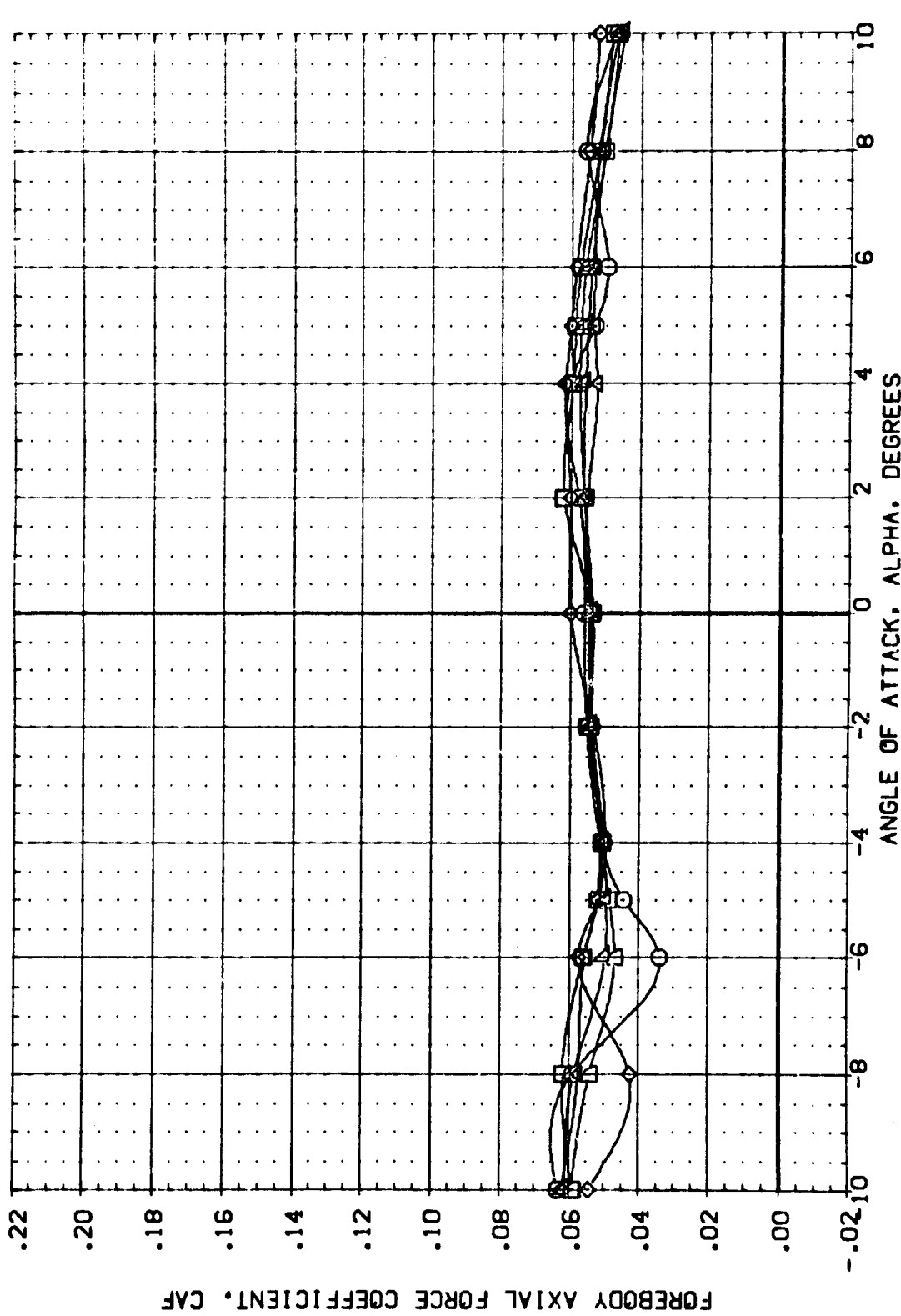
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.140	SREF 6.1980
(C83T21)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.140	REF 5.3130
(C83T22)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.140	UMRP 5.3130
(C83T23)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	UMRP 2.5490
(C83T24)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	UMRP .0000
(C83T25)	MSFC 570((A31F)(T9)(U5)/(03)/(S3/2)/(S3/2))	.000	1.500	.280	UMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83120) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

(C83121) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

(C83122) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

(C83123) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

(C83124) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

(C83125) MSFC 570(IA3IF)(T9)(U5)(O3)(S3/2)/(S3/2)

BETA ORBITING DELTA Z

.000 .500 .140

.000 .500 .140

.000 .500 .140

.000 .500 .280

.000 .500 .280

.000 .500 .280

REFERENCE INFORMATION

SREF 6.1980 SQ. IN

LREF 5.3130 "/

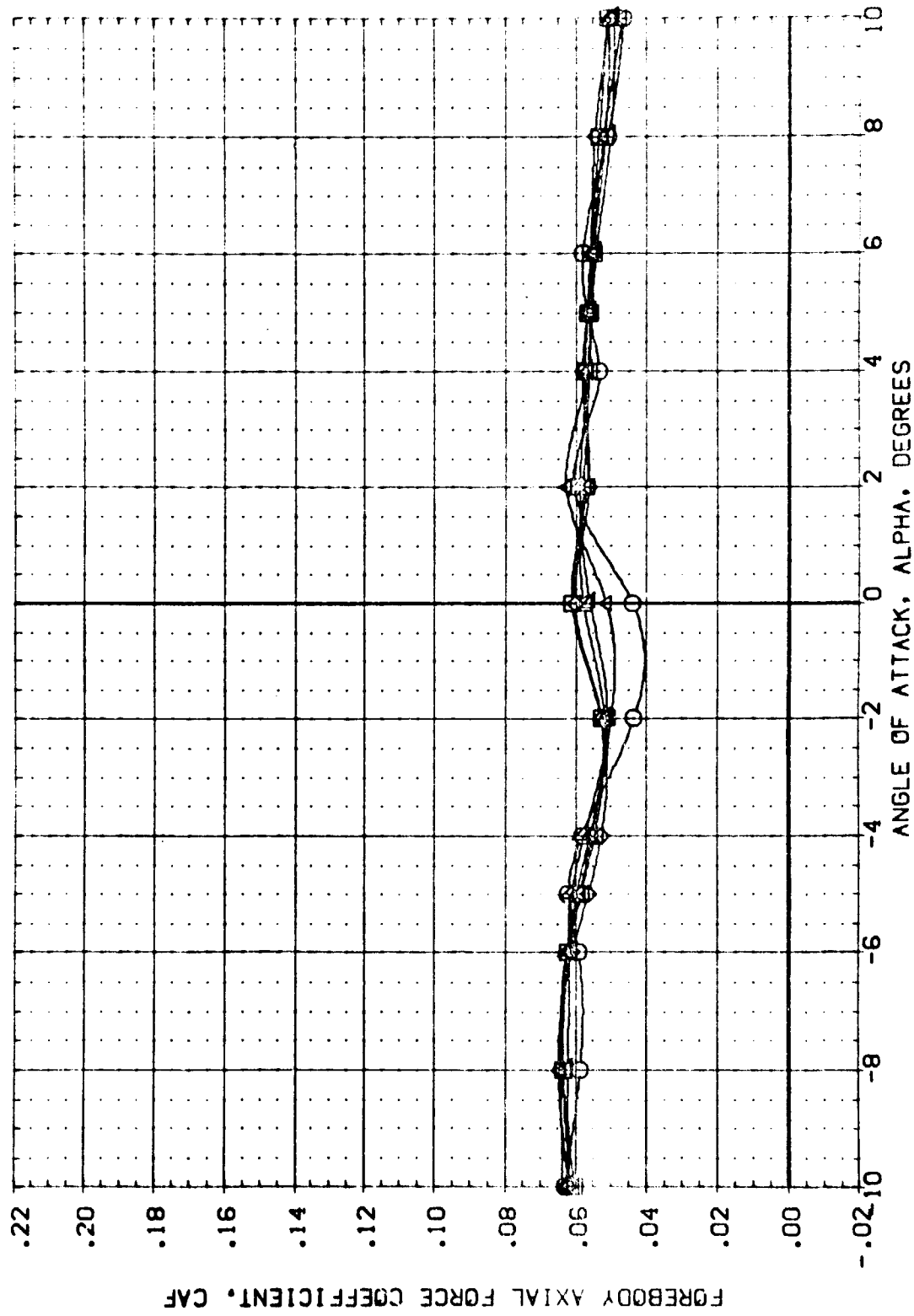
BREF 5.3130 "/

XMRP 2.5490 "/

YMRP .0000 "/

ZMRP .0000 "/

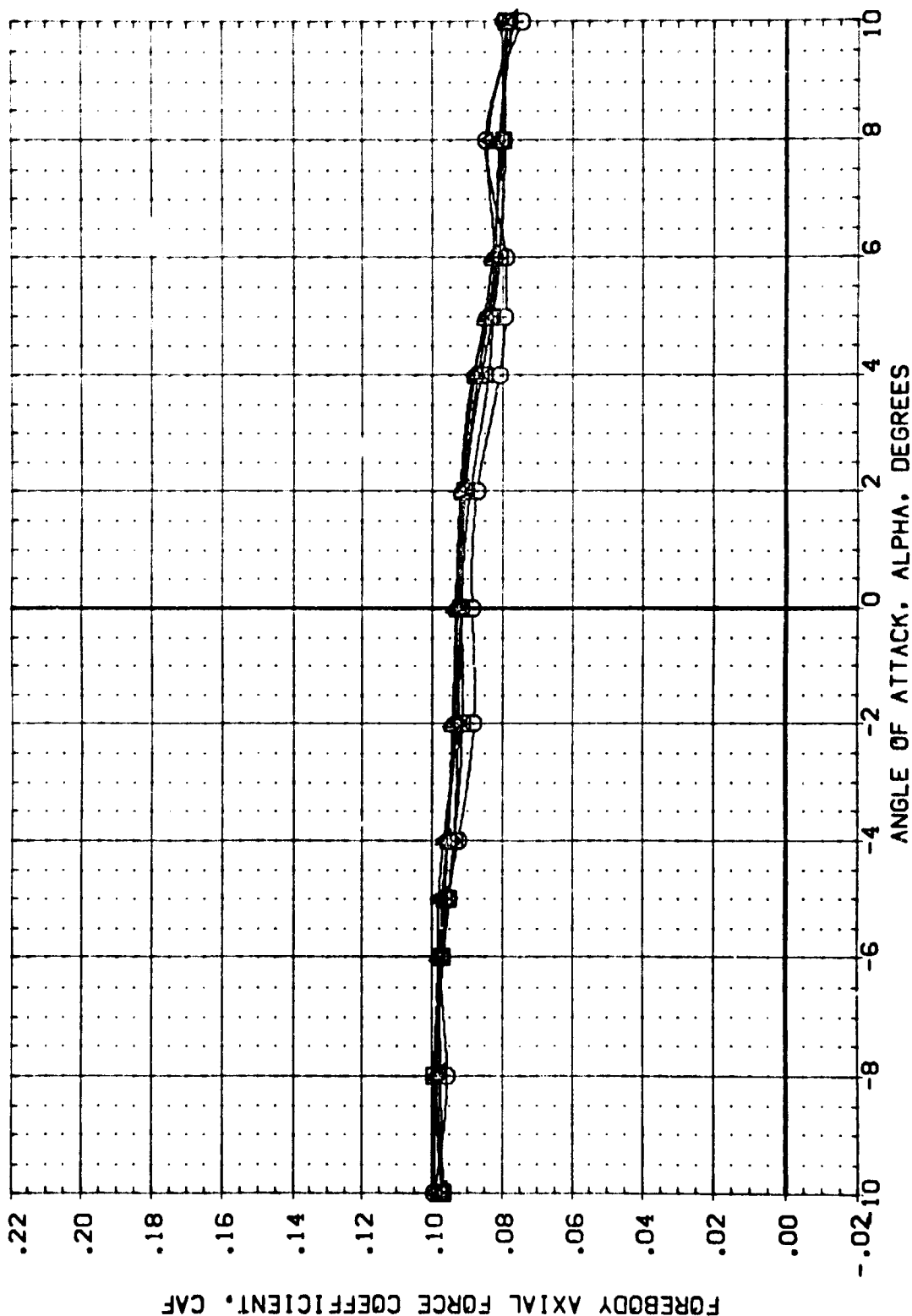
SCALE .0340



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(B)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040

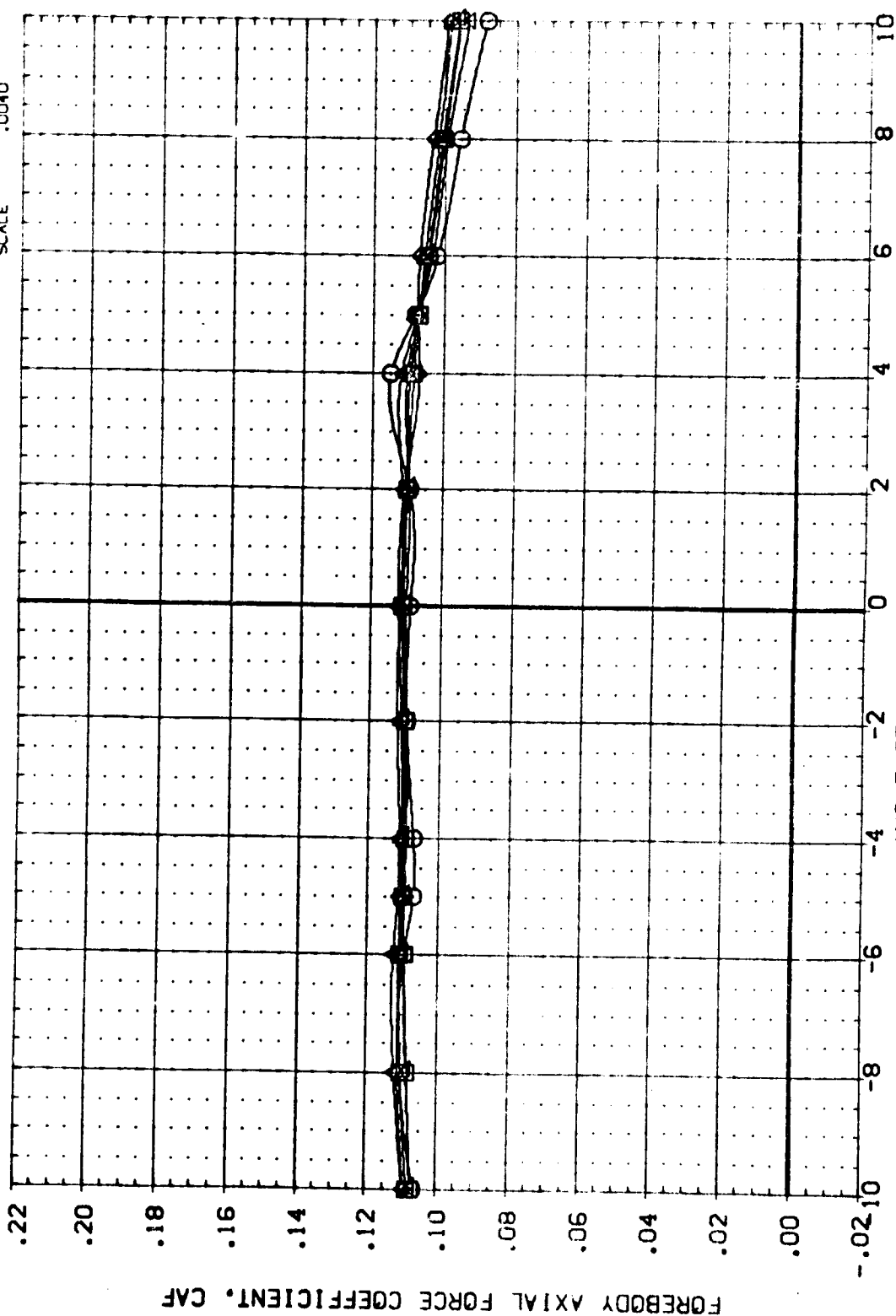


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(C)MACH = 1.05



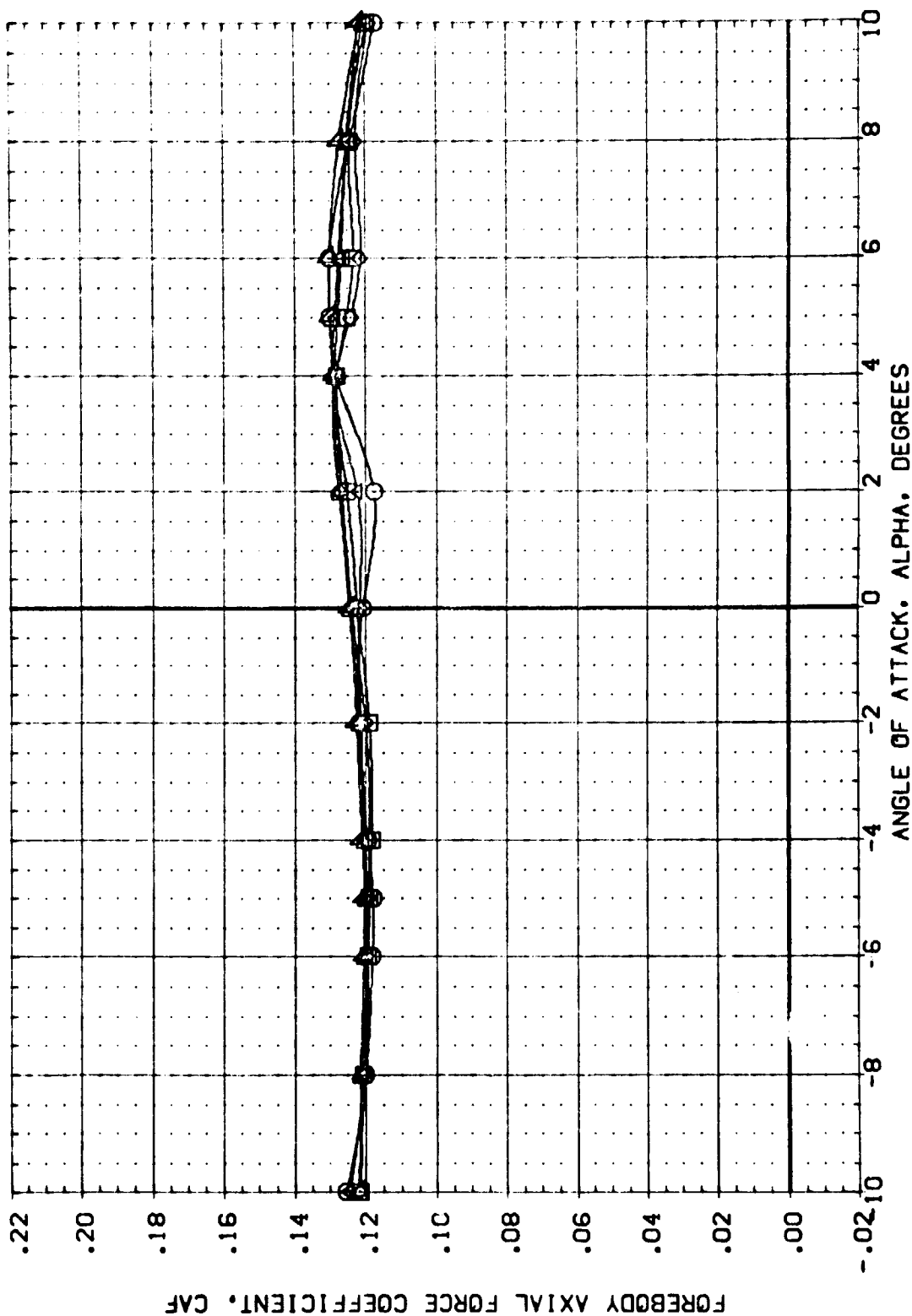
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.260	XMRP 2.5490
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.260	YMRP .0000
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.260	ZMRP .0000
					SCALE .0010



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(0)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5450 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040

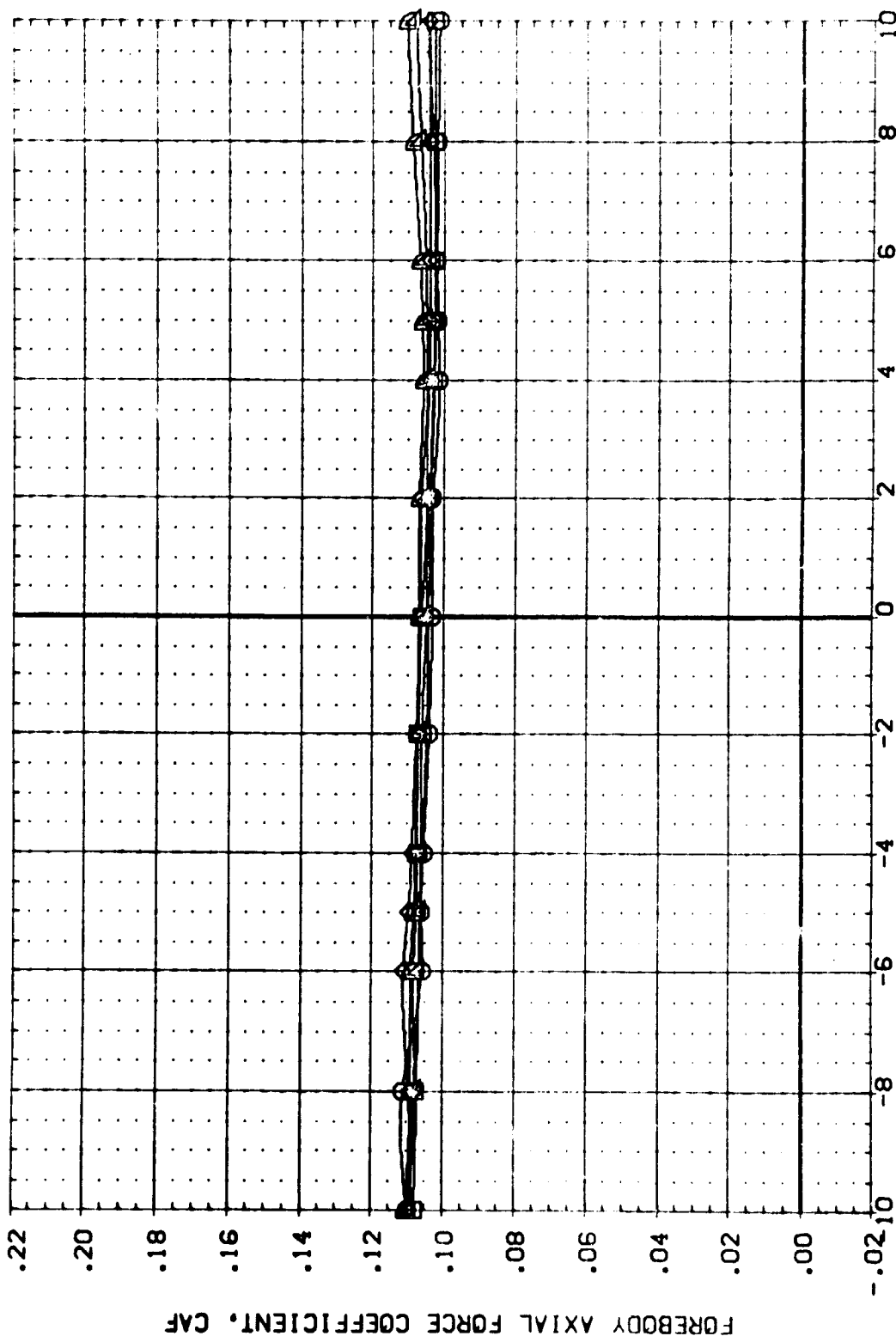


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.97

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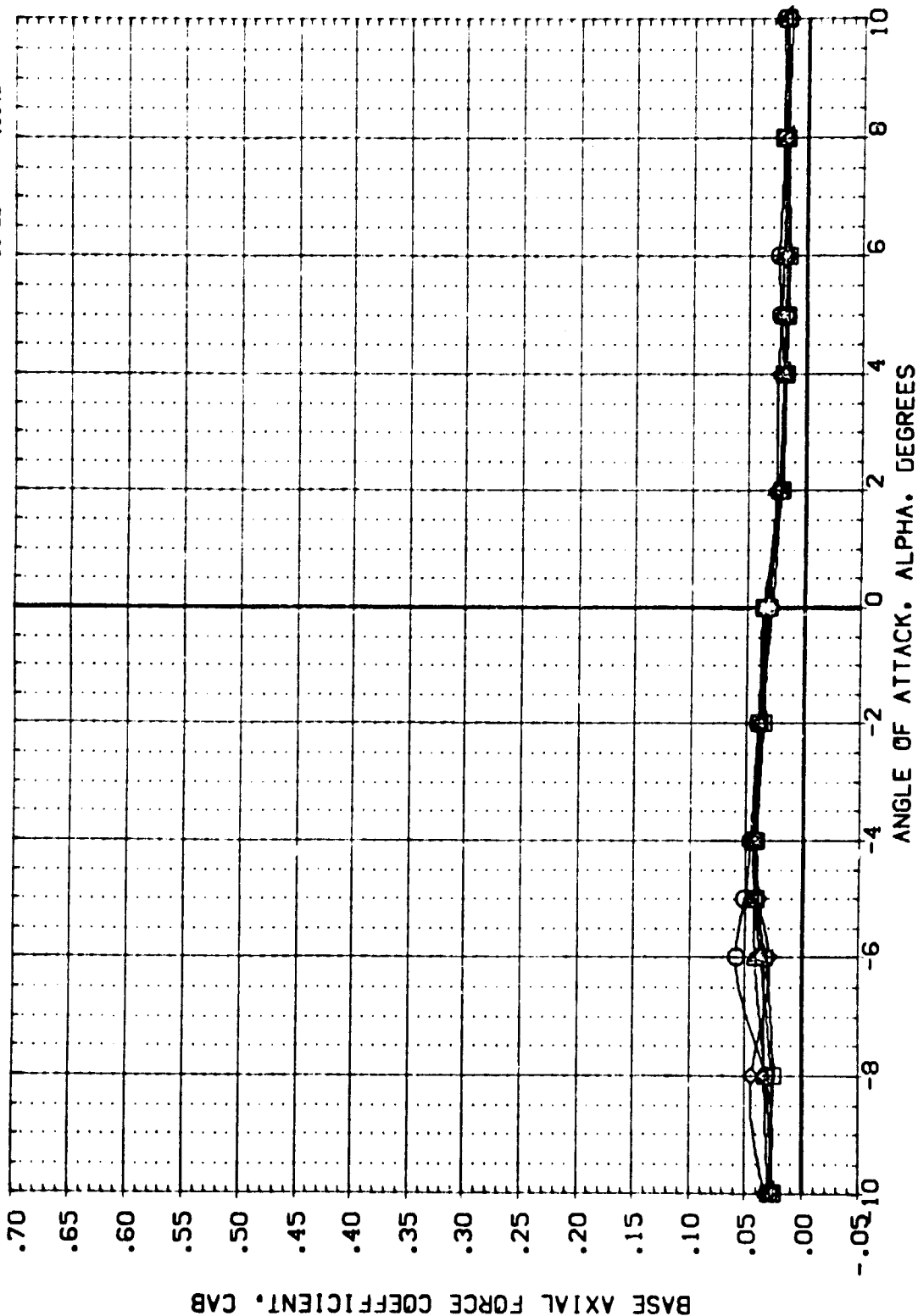
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DRBINC	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980
(C83121)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83122)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83123)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5480
(C83124)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83125)	MSFC 570(IA31F)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(F)MACH = 3.48

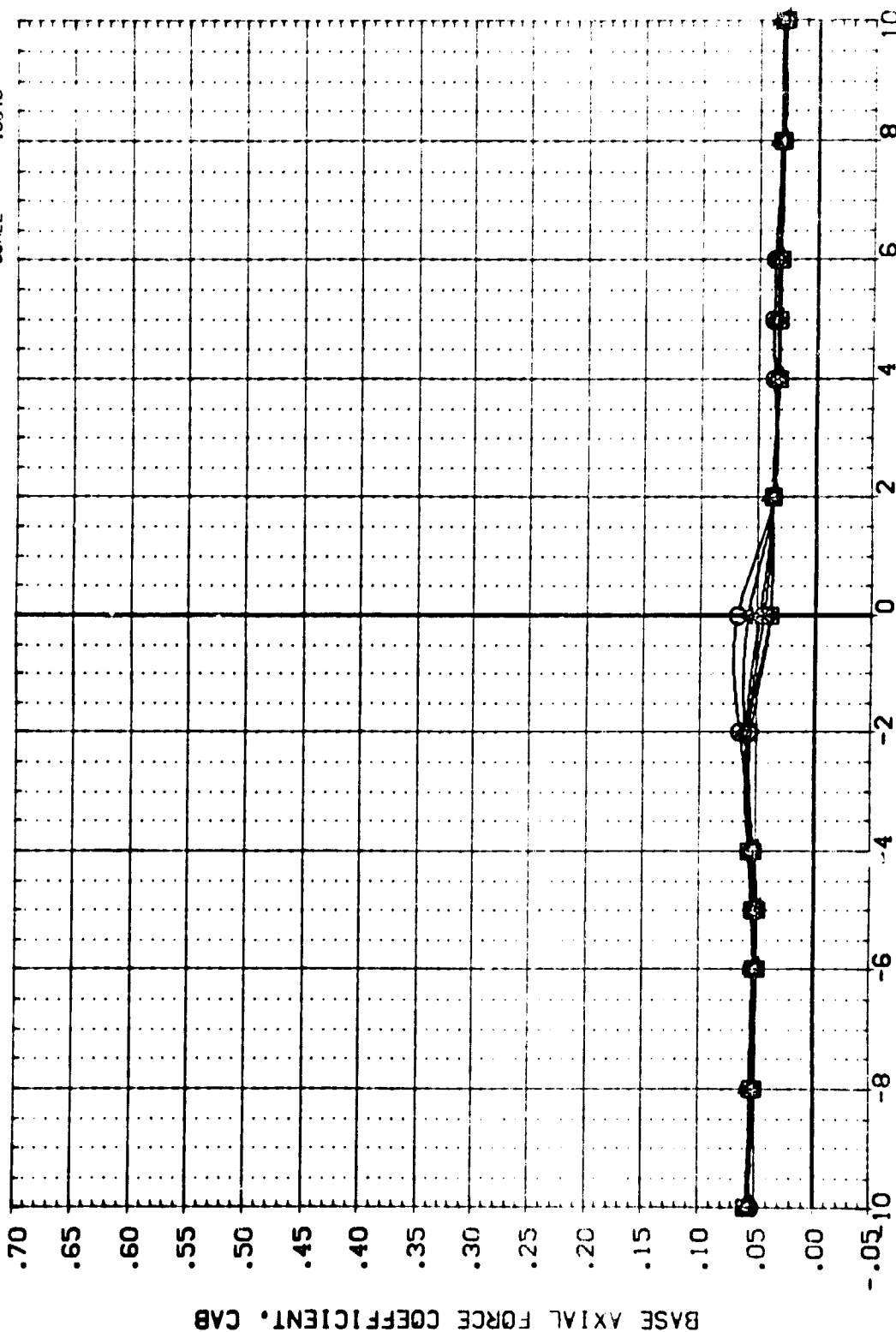
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 IN.
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP 2.5490
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (S3/2)/(S3/2)

(B)MACH = .90

REFERENCE INFORMATION

SREF	6.1980	SO	IN
LREF	5.3130	N	IN
BREF	5.3130	N	IN
XMRP	2.5490	N	IN
YMRP	.0000	N	IN
ZMRP	.0000	N	IN
SCALE	.0040		

BETA

ORBITC	DEL IAZ
-.500	.140
.500	.140
1.500	.140
-.500	.280
.500	.280
1.500	.280

DATA SET SYMBOL CONFIGURATION DESCRIPTION

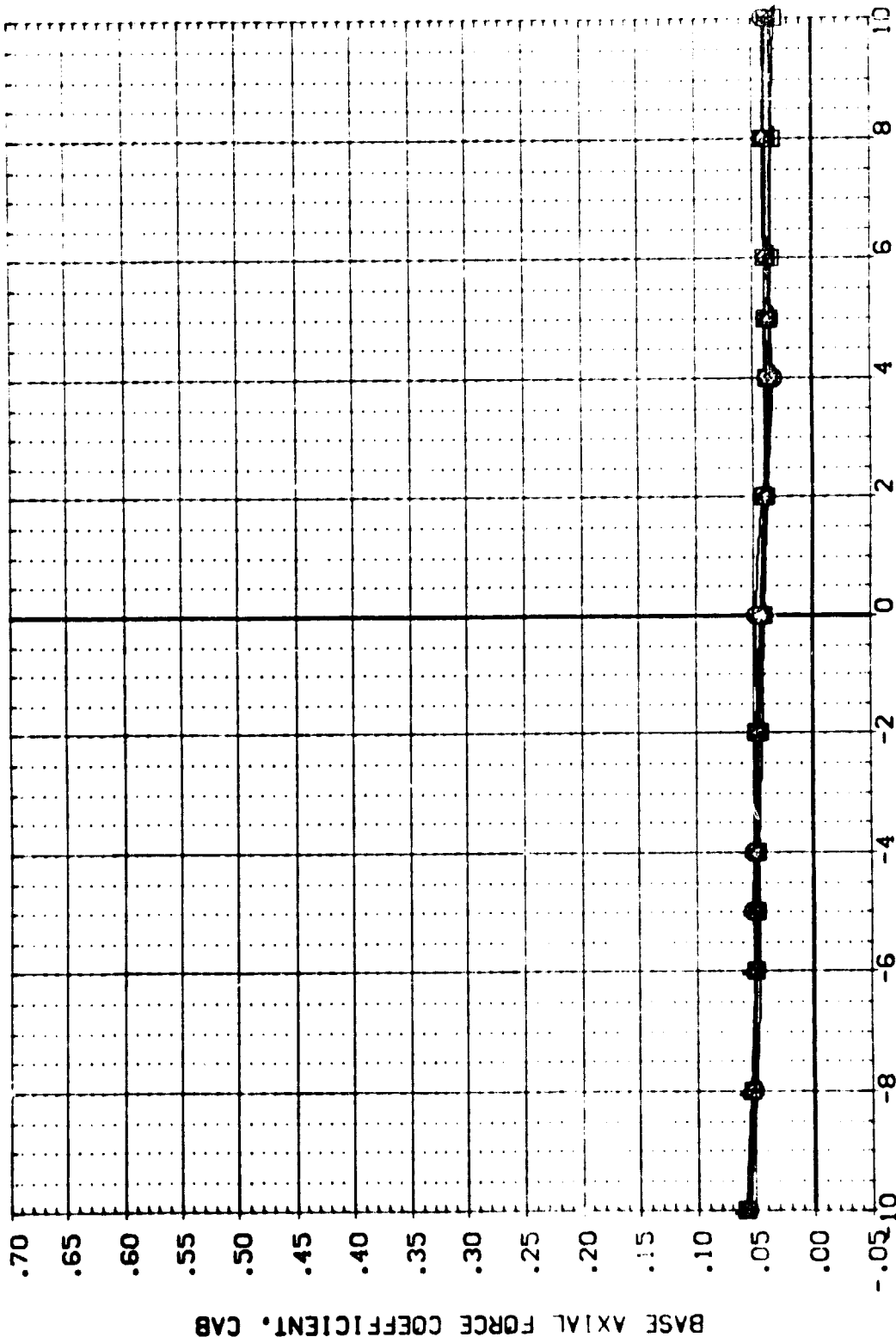
(C83120)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))
(C83121)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))
(C83122)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))
(C83123)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))
(C83124)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))
(C83125)	MSFC 570((A31F)(T9)(U5)(03)/(S3/2)/(S3/2))



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.05

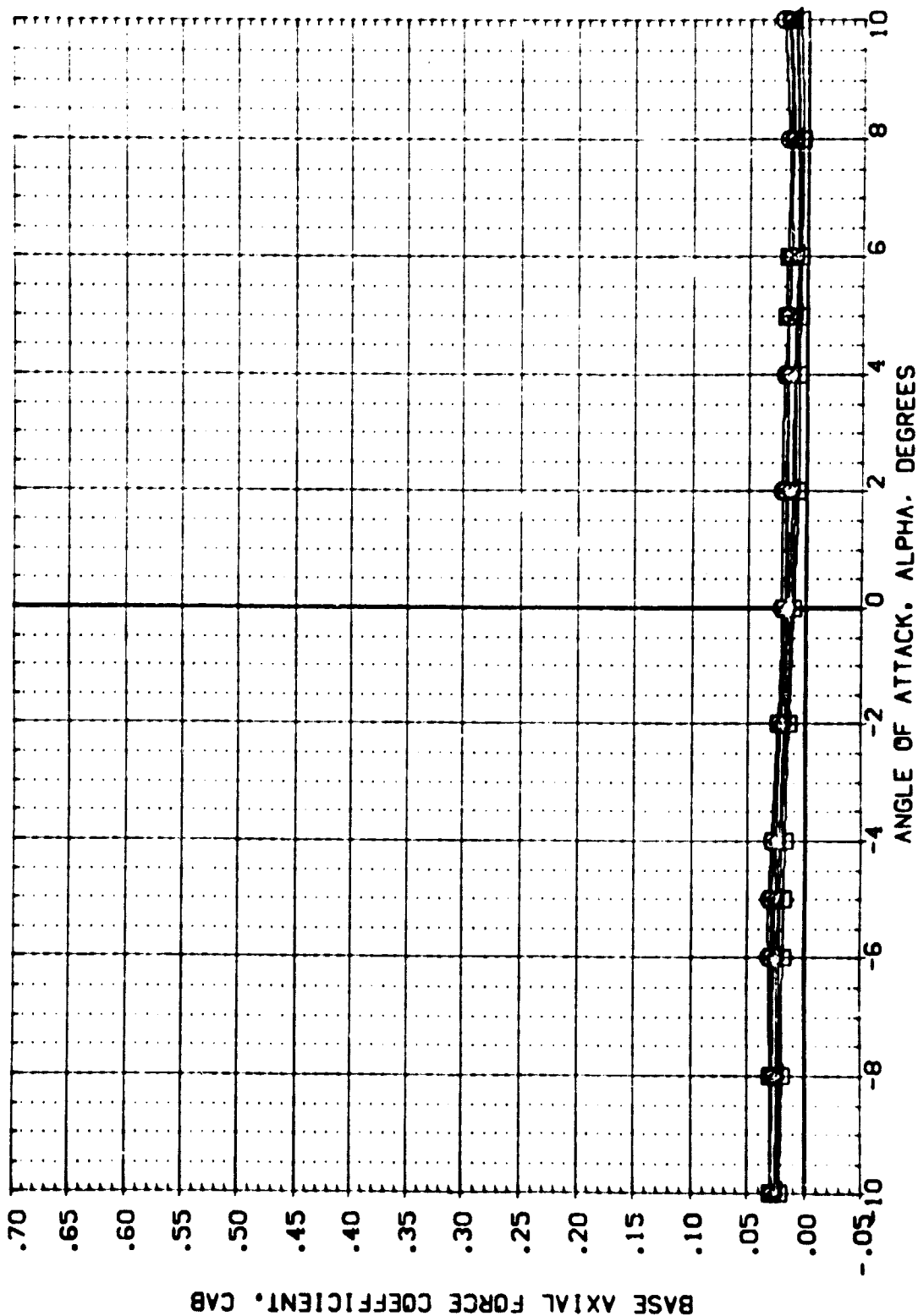
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SC. IN
(C83121)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83124)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83125)	MSFC 570(I A31F)(T9)(U5)(I03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LOEF 5.3130 IN
(C83T22)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83T23)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	AMRP .0000
(C83T24)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.280	VMRP .0000
(C83T25)	MSFC 570(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(E)MACH = 1.97

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83120) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

(C83121) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

(C83122) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

(C83123) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

(C83124) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

(C83125) MSFC 5701(A31F)(T9)(U5)/(S3/2)/(S3/2)

BETA ORBITAL DELTA Z

.000 .500 .140

.000 .500 .140

.000 .500 .140

.000 .500 .280

.000 .500 .280

REFERENCE INFORMATION

SREF 6.1980 SQ. IN

LREF 5.3130

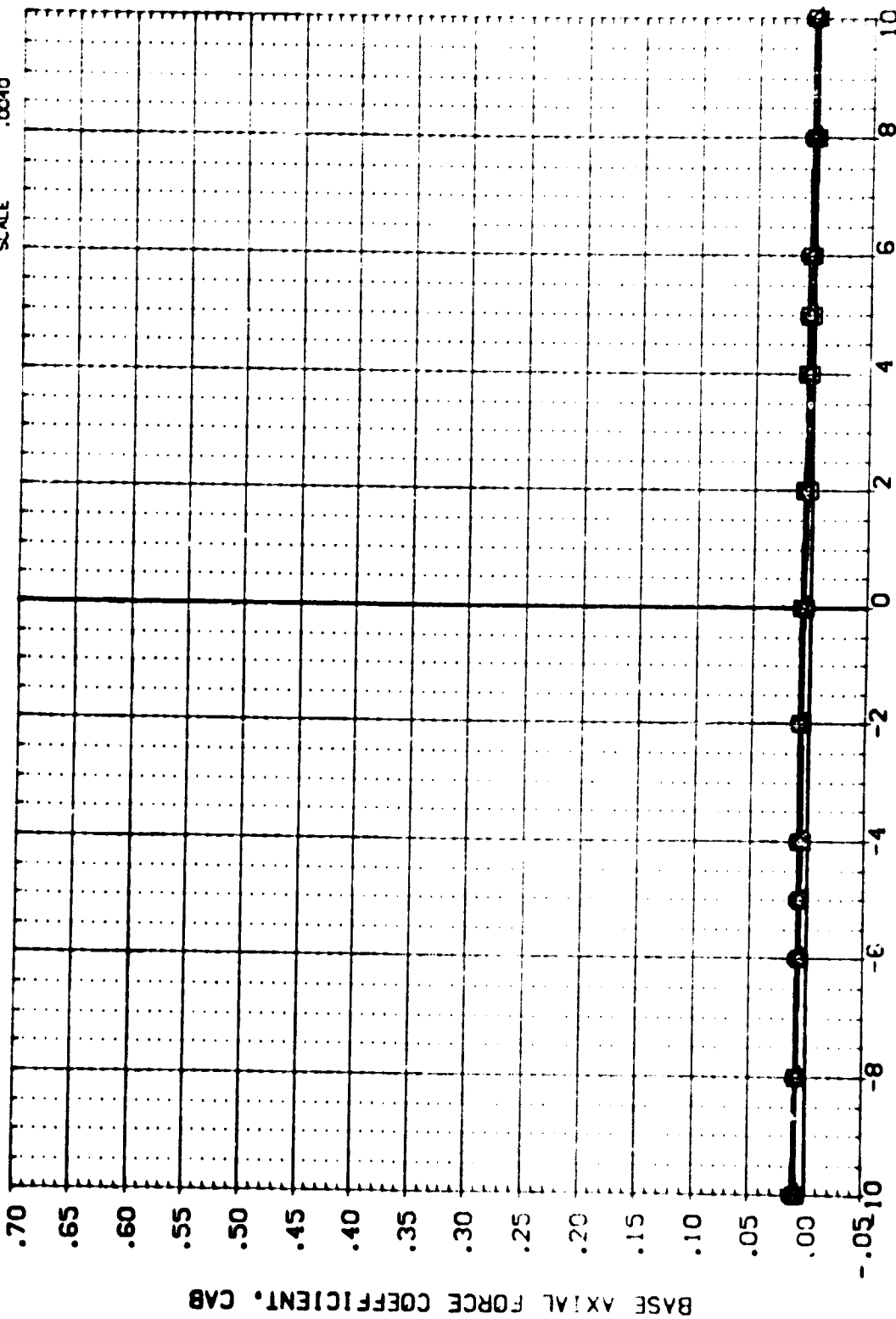
BREF 5.3130

XREF 2.5490

YREF .0000

ZREF .0000

SCALE .0040

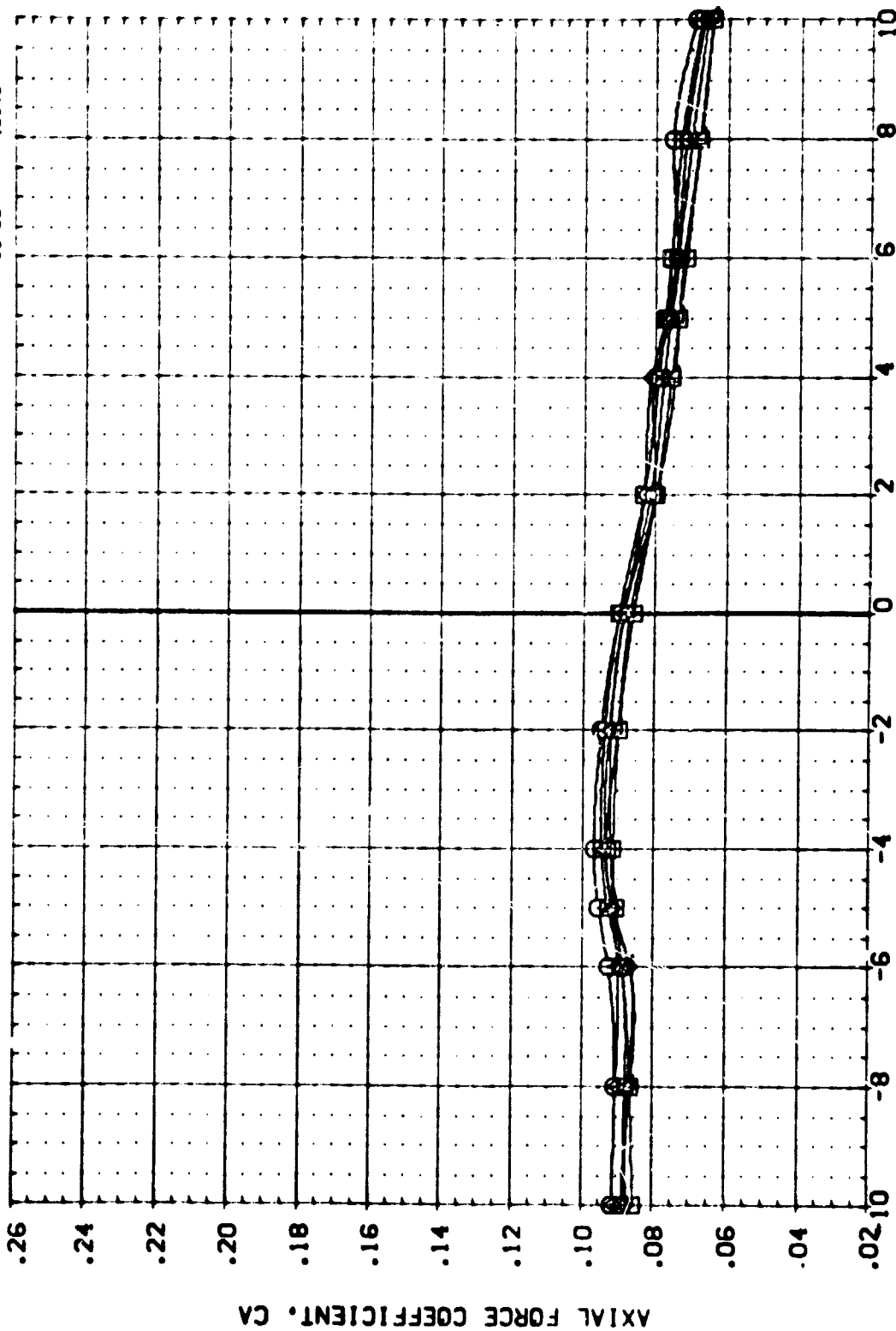


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (S3/2)/(S3/2)

(F)MACH = 3.48



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
CB3120	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 IN.
CB3121	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
CB3122	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
CB3123	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.260	XHAP 2.5490 IN.
CB3124	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.260	YHAP .0000 IN.
CB3125	MSFC 5701(A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.000	.500	.260	ZHAP .0000 IN.
					SCALE .0010

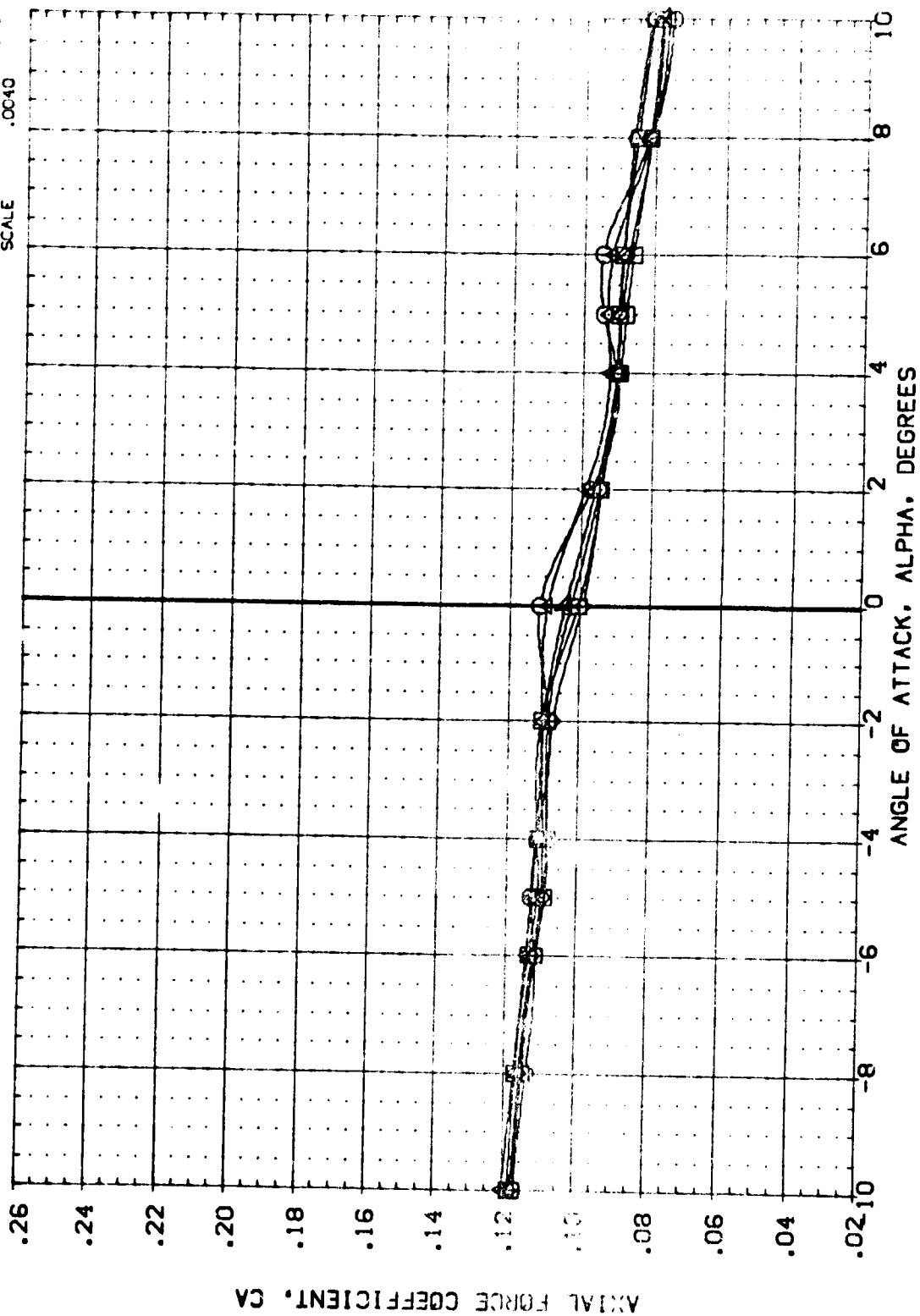


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(A)MACH = .60



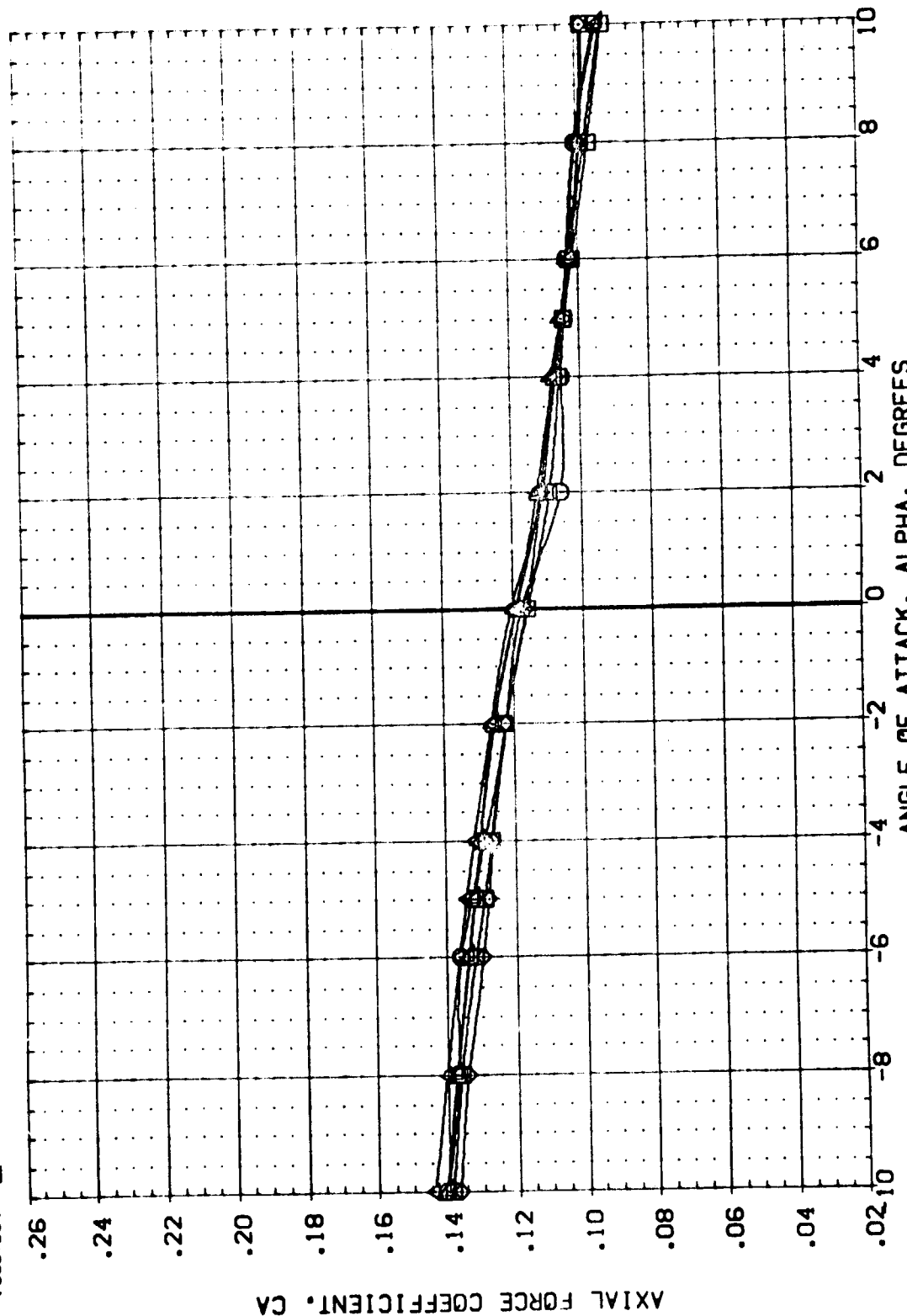
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	DRB INC	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (S3/2)/(S3/2)

(B)MACH = .90

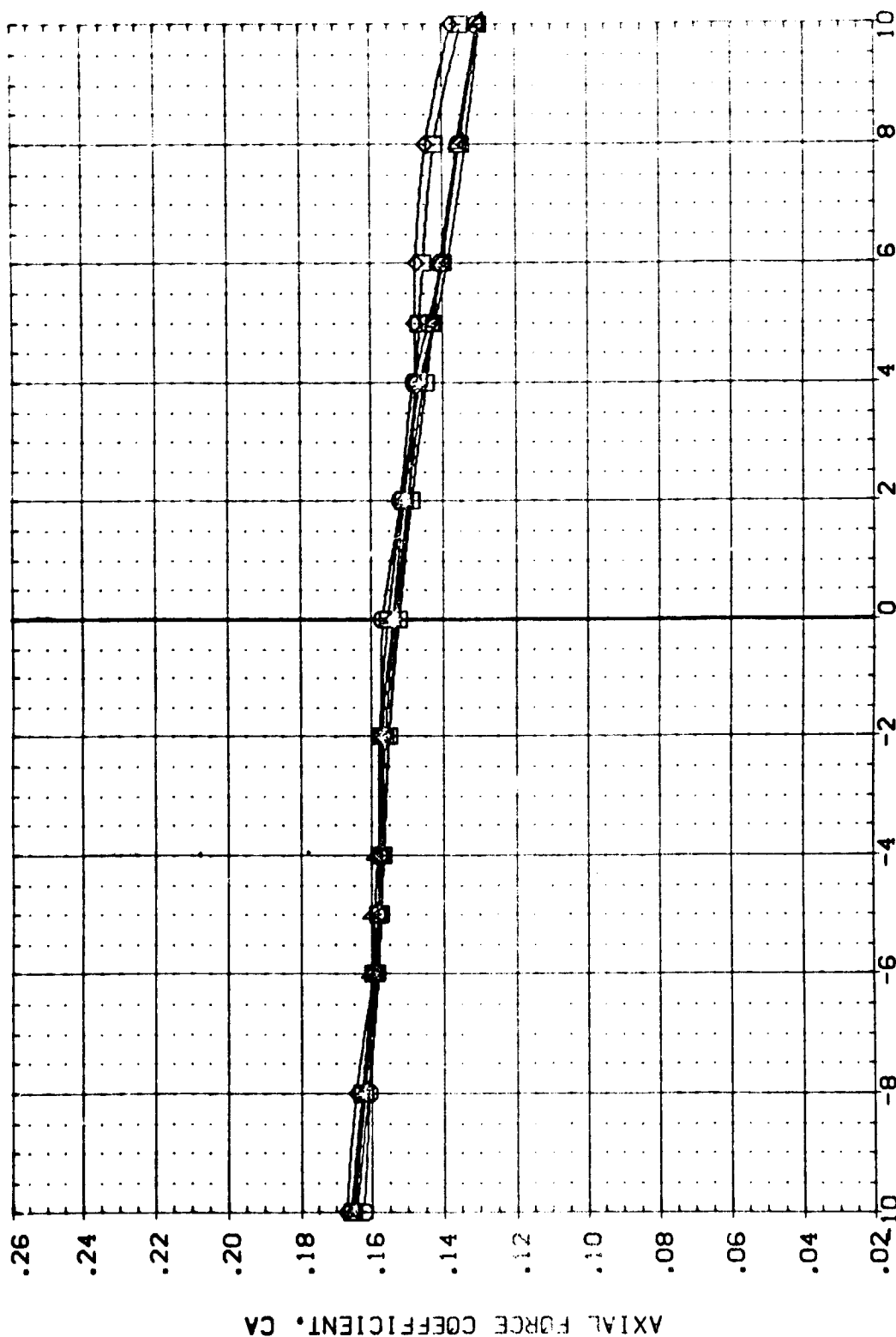
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	-500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	-500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	1500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	-500	.280	YMRP 2.5490 IN.
(C83T24)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	-500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570 (A31F) (T9) (U5) (S3/2) (S3/2)	.000	1500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

(C)MACH = 1.05

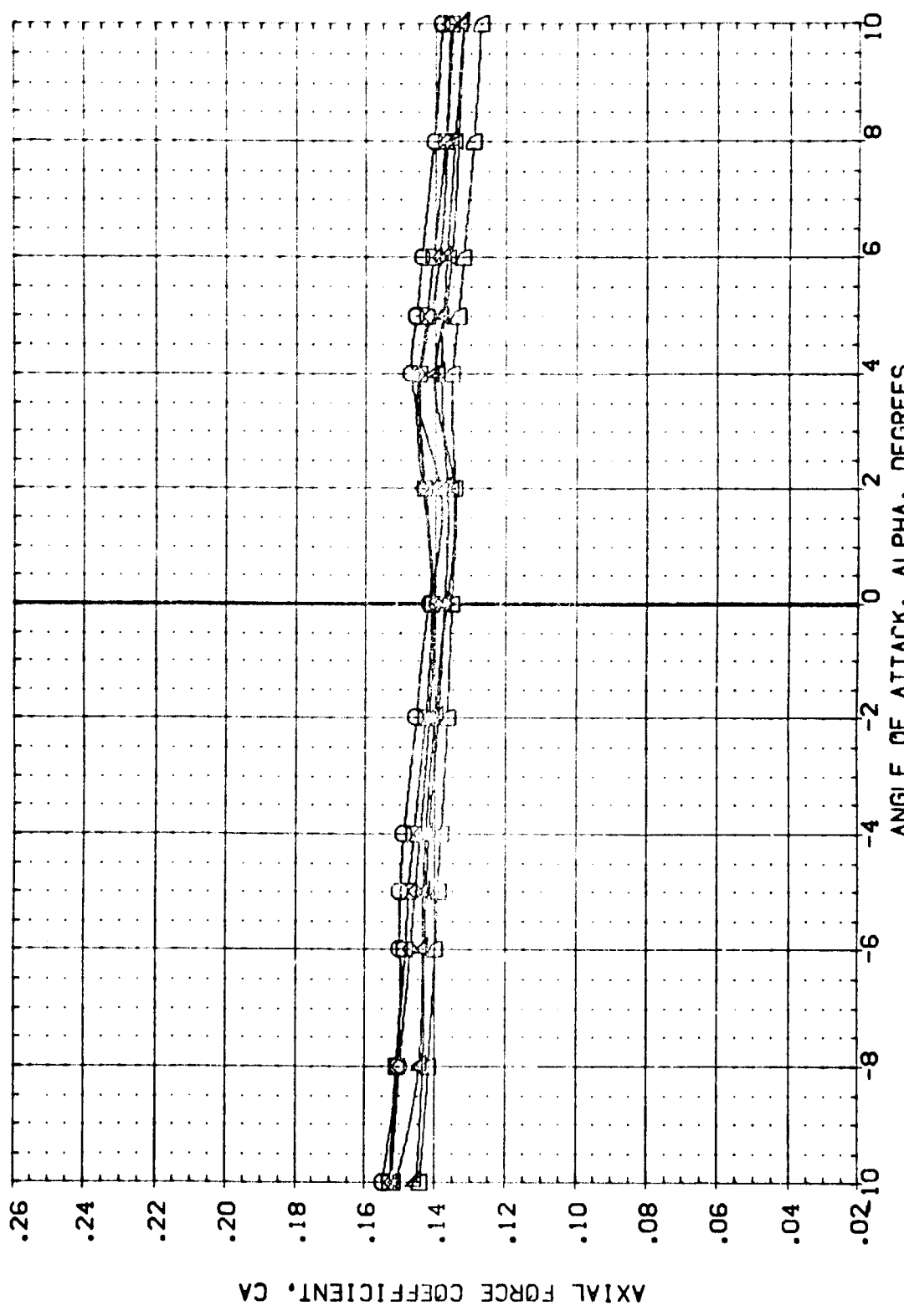
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SO. IN
(C83121)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.313C IN.
(C83122)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.313C IN.
(C83123)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.549C IN.
(C83124)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .000C IN.
(C83125)	MSFC 570(I A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .000C IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

(O)MACH = 1.25

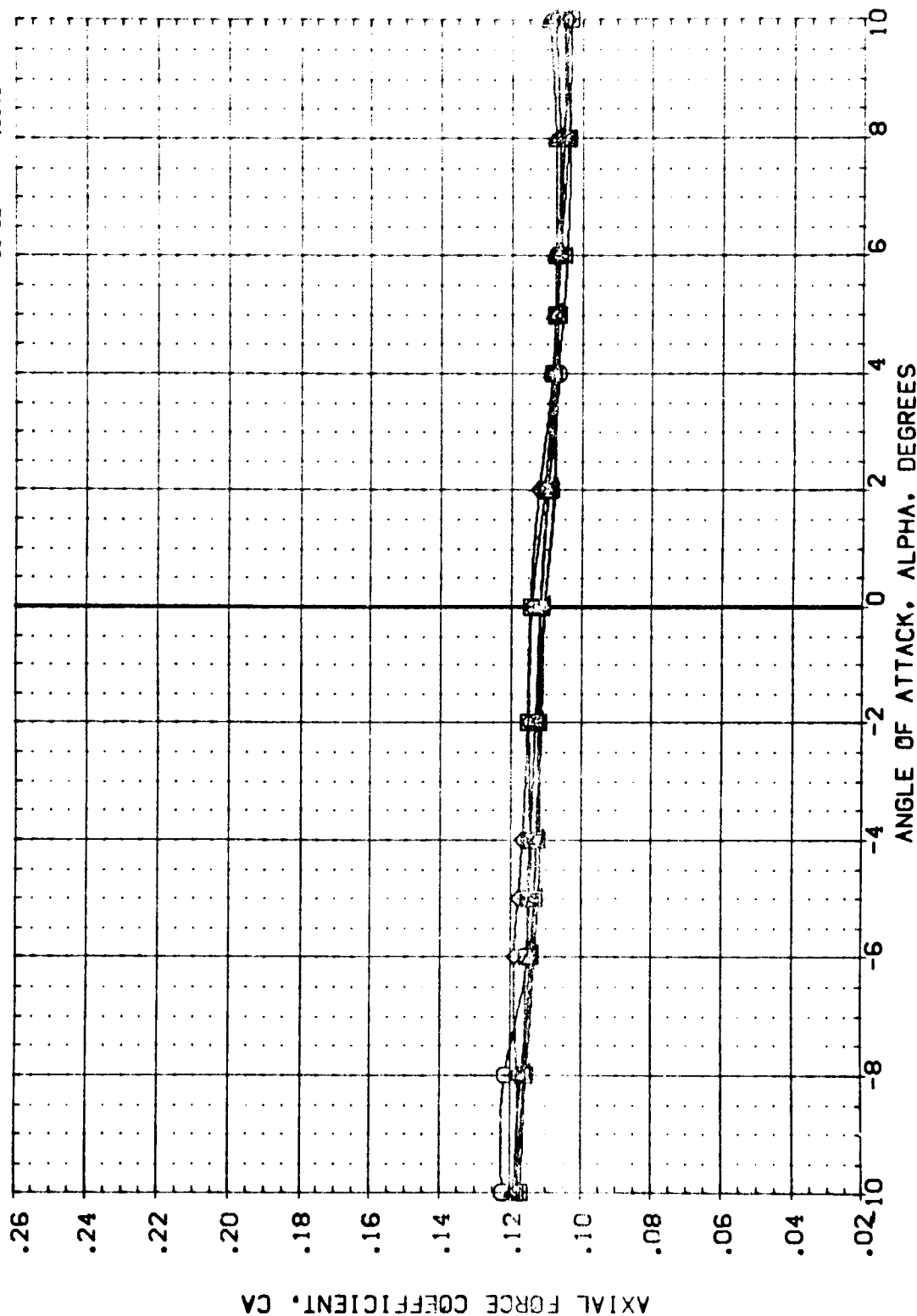
DATA SET SYMBOL	CONF IGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83121)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 IN.
(C83124)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83125)	MSFC 5701(A31F)(T9)(U5)(03)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 IN.
(C83T21)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(I A31F)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
				SCALE	.0040



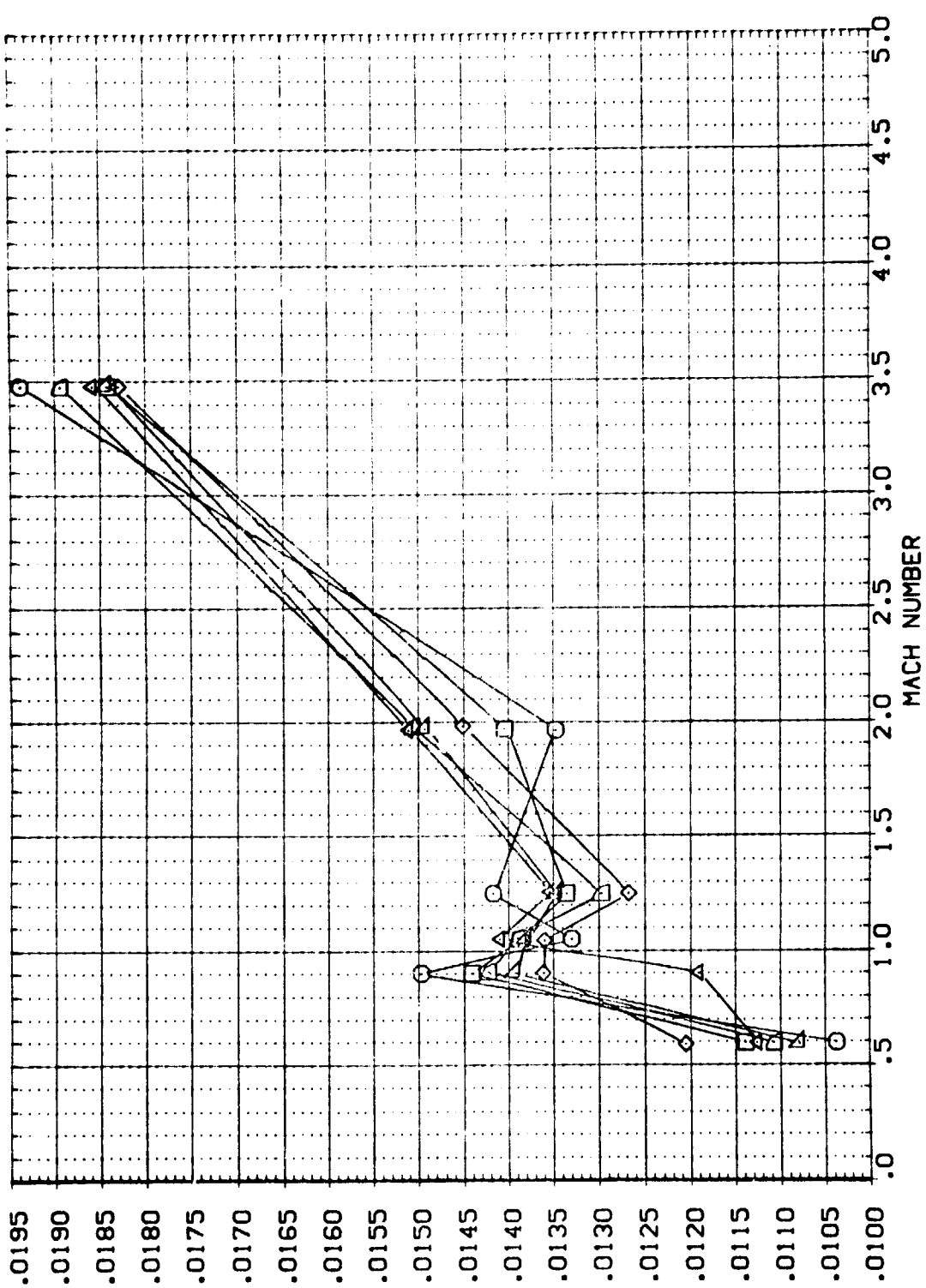
STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (S3/2)/(S3/2)

(F)MACH = 3.48

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBINC DELTAZ REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBINC	DELTAZ	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SQ. IN
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 IN
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040

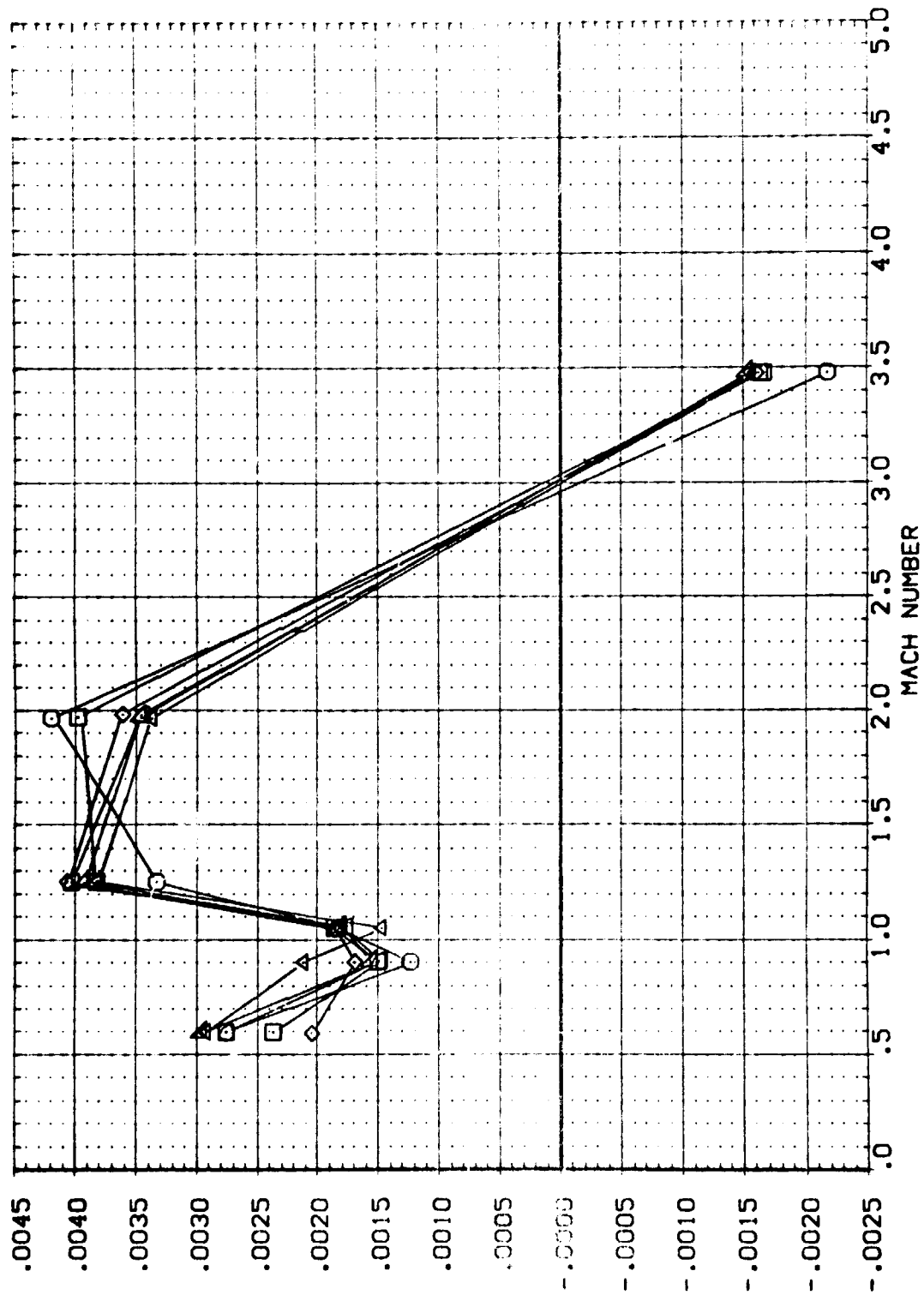
NORMAL FORCE COEFFICIENT DERIVATIVE WITH ALPHA, CNALFA, PER DEGREE



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

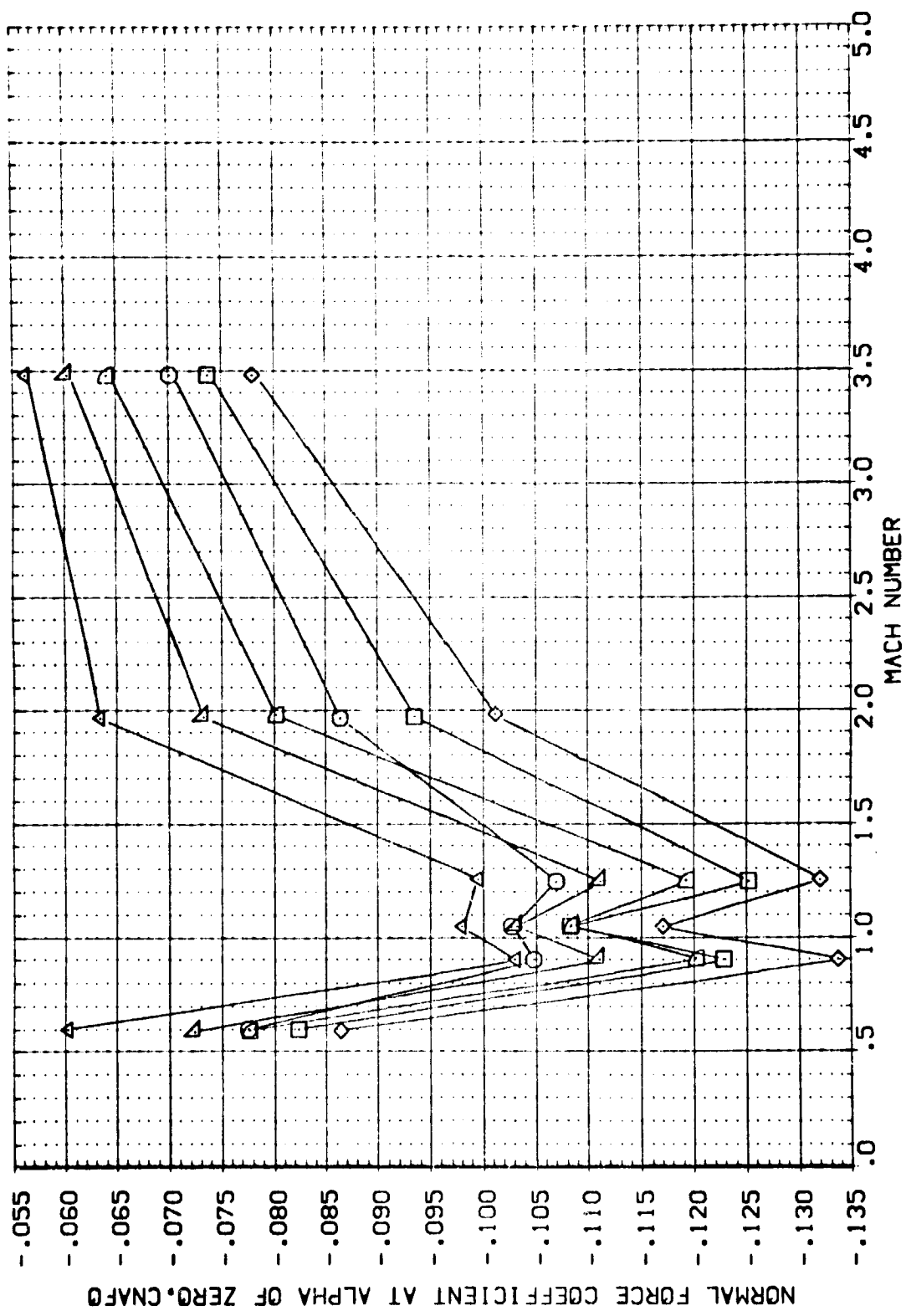
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 5.1980 SO. IN
(C83121)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP 2.5490 IN.
(C83124)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83125)	MSFC 5701(A31F)(T9)(U5)(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040

PITCHING MOMENT COEFFICIENT DERIVATIVE WITH ALPHA, CLM/F, PER DEGREE



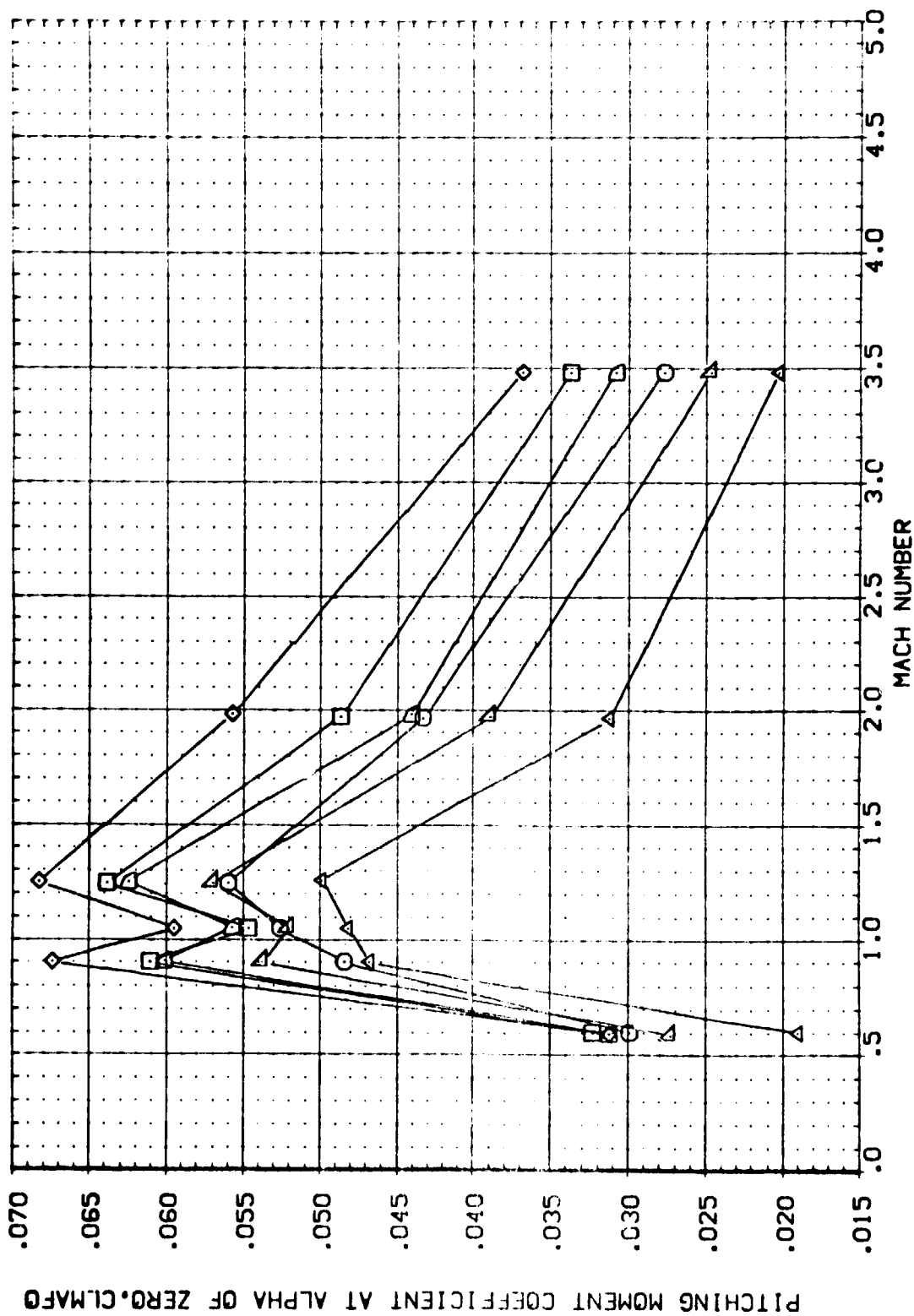
STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83120)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	SREF 6.1980 SO. IN
(C83121)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83122)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83123)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83124)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83125)	MSFC 570(I A31F)(T9)(U5)/(O3)/(S3/2)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83T20)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	SREF 6.1980 SO. IN.
(C83T21)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83T22)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83T23)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83T24)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83T25)	MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL
 (C83T20)
 (C83T21)
 (C83T22)
 (C83T23)
 (C83T24)
 (C83T25)

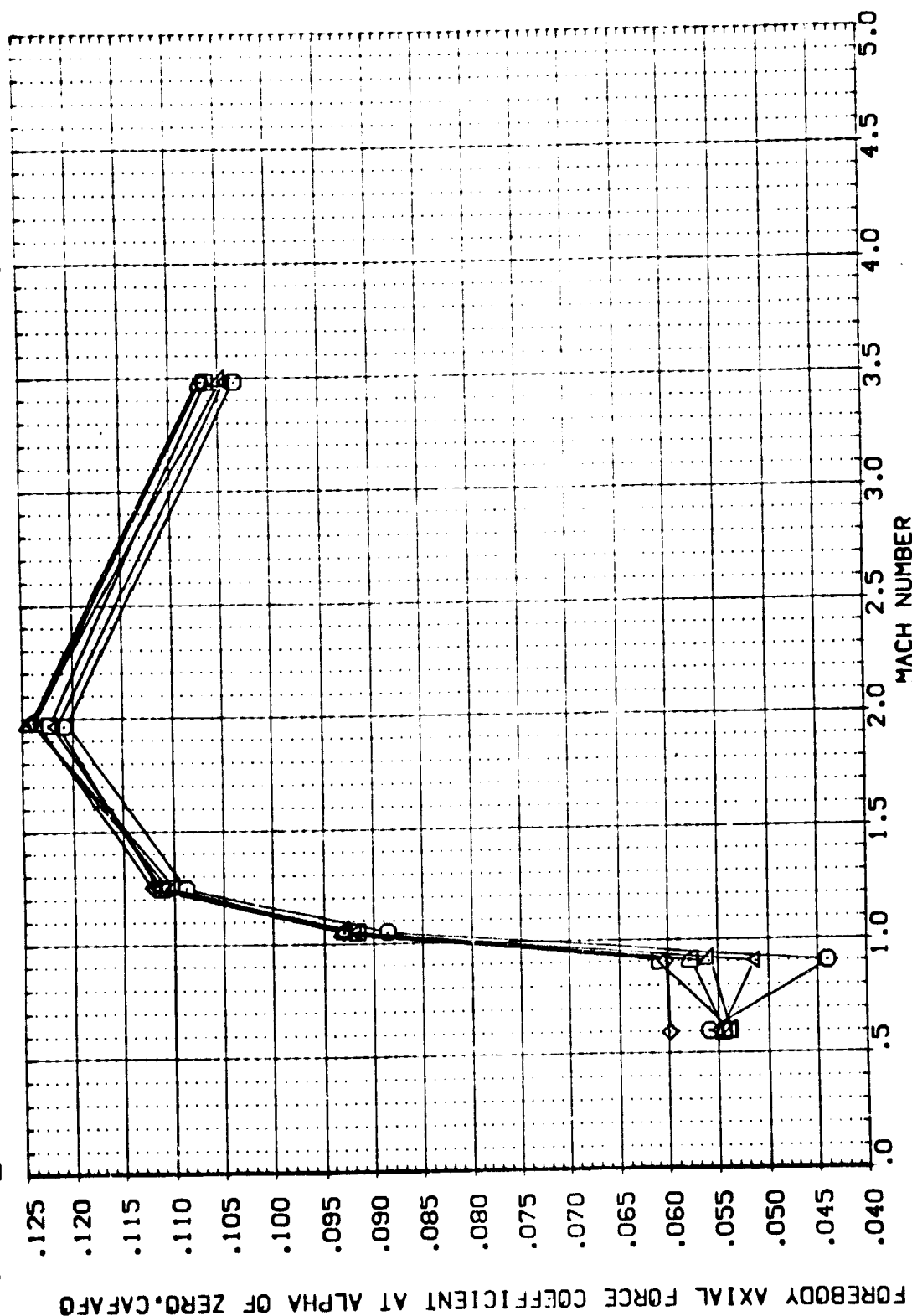
CONFIGURATION DESCRIPTION
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)
 MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)

BETA
 .000
 .000
 .000
 .000
 .000
 .000

ORBITAL
 .500
 .500
 .500
 .500
 .500
 .500

DELTA Z
 .140
 .140
 .140
 .280
 .280
 .280

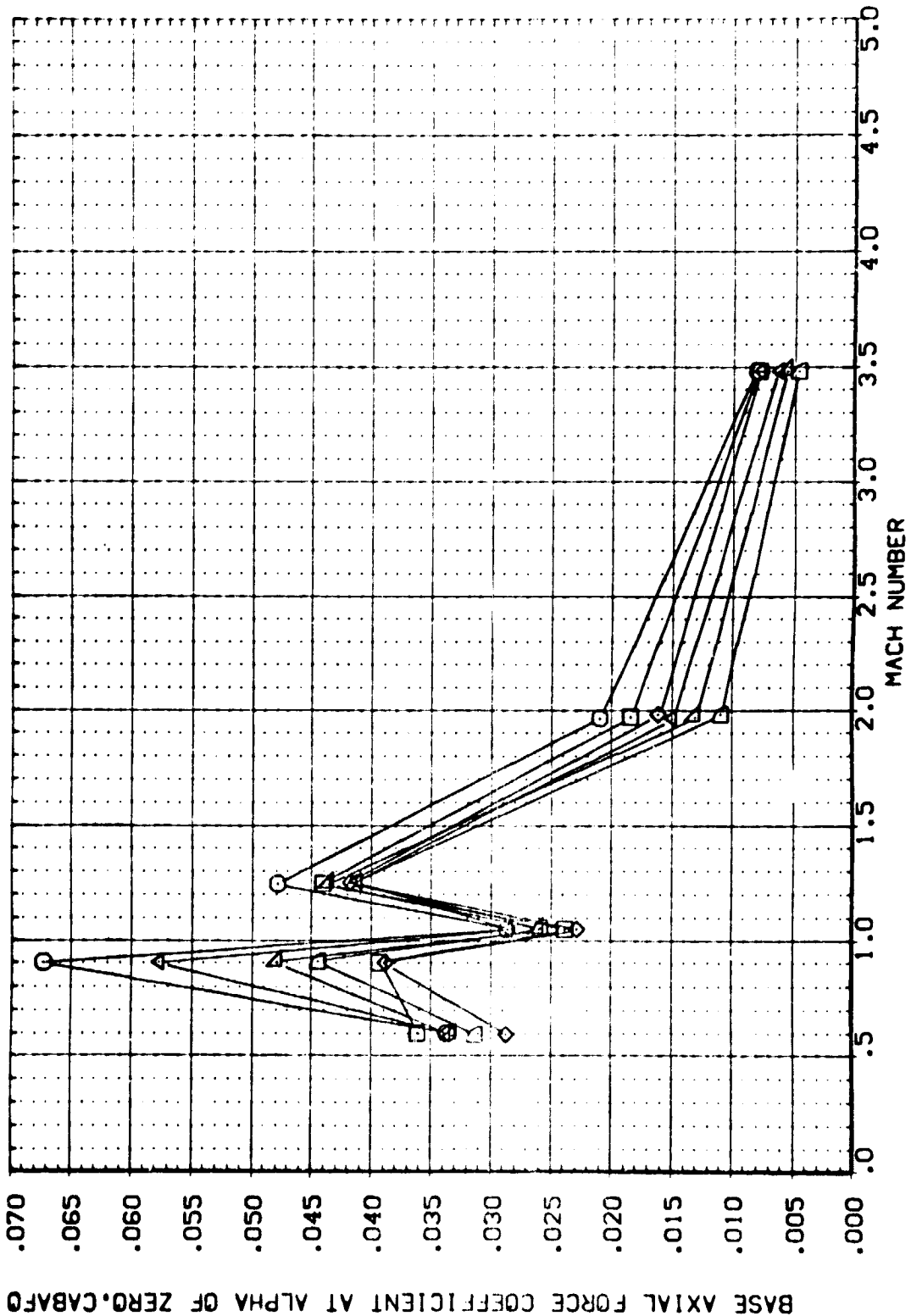
REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORIGIN DELTAZ REFERENCE INFORMATION SO. IN

(C83T20)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	-.500	.140	SREF	6.1980	IN.
(C83T21)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	-.500	.140	LREF	5.3130	IN.
(C83T22)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	1.500	.140	BREF	5.3130	IN.
(C83T23)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	-.500	.280	XMRP	2.5450	IN.
(C83T24)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	.500	.280	YMRP	.0000	IN.
(C83T25)	MSFC 570((IA3IF)(T9)(U5)/(O3)/(S3/2)/(S3/2))	.000	1.500	.280	ZMRP	.0000	IN.
					SCALE	.0040	

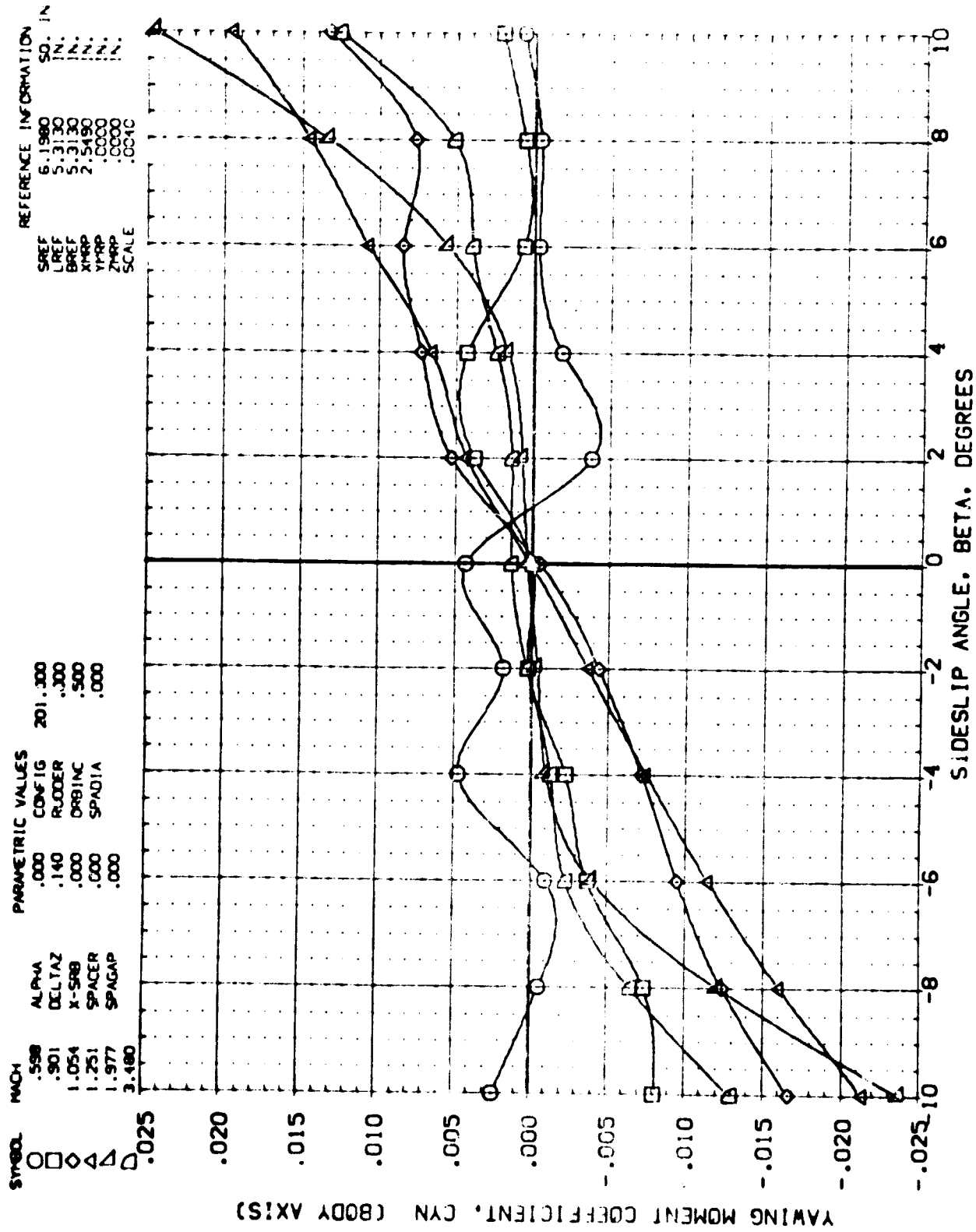


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (O3)/(S3/2)/(S3/2)



(A83T26)

MSFC 570(IA31F)(T9)(U5)(03)/(S3/2)/(S3/2)



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

PAGE 294

MSFC 570(IA31F)(T9)(U5)/(03)/(S3/2)/(S3/2)

(A83T26)

SYMBOL MACH

PARAMETRIC VALUES

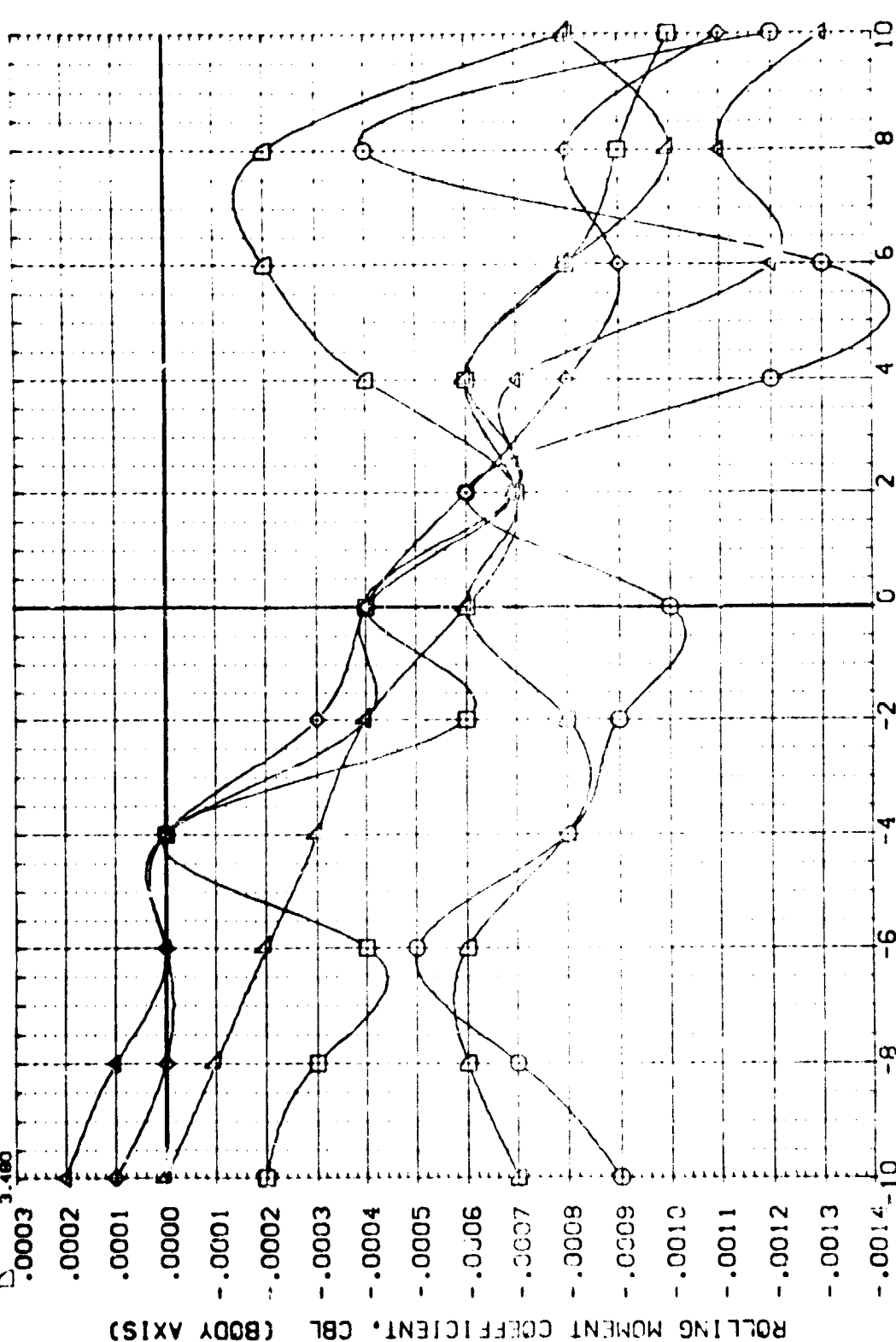
ALPHA
DELTA Z
X-508
SPACER
SPAGAP

CONF IG
RUDDER
DRB INC
SPADIA

201.000
.000
.500
.000

6.195C
5.313C
5.313C
2.549C
0.000C
0.000C
0.004C

SO. IN
IN.
IN.
IN.
IN.
IN.
IN.

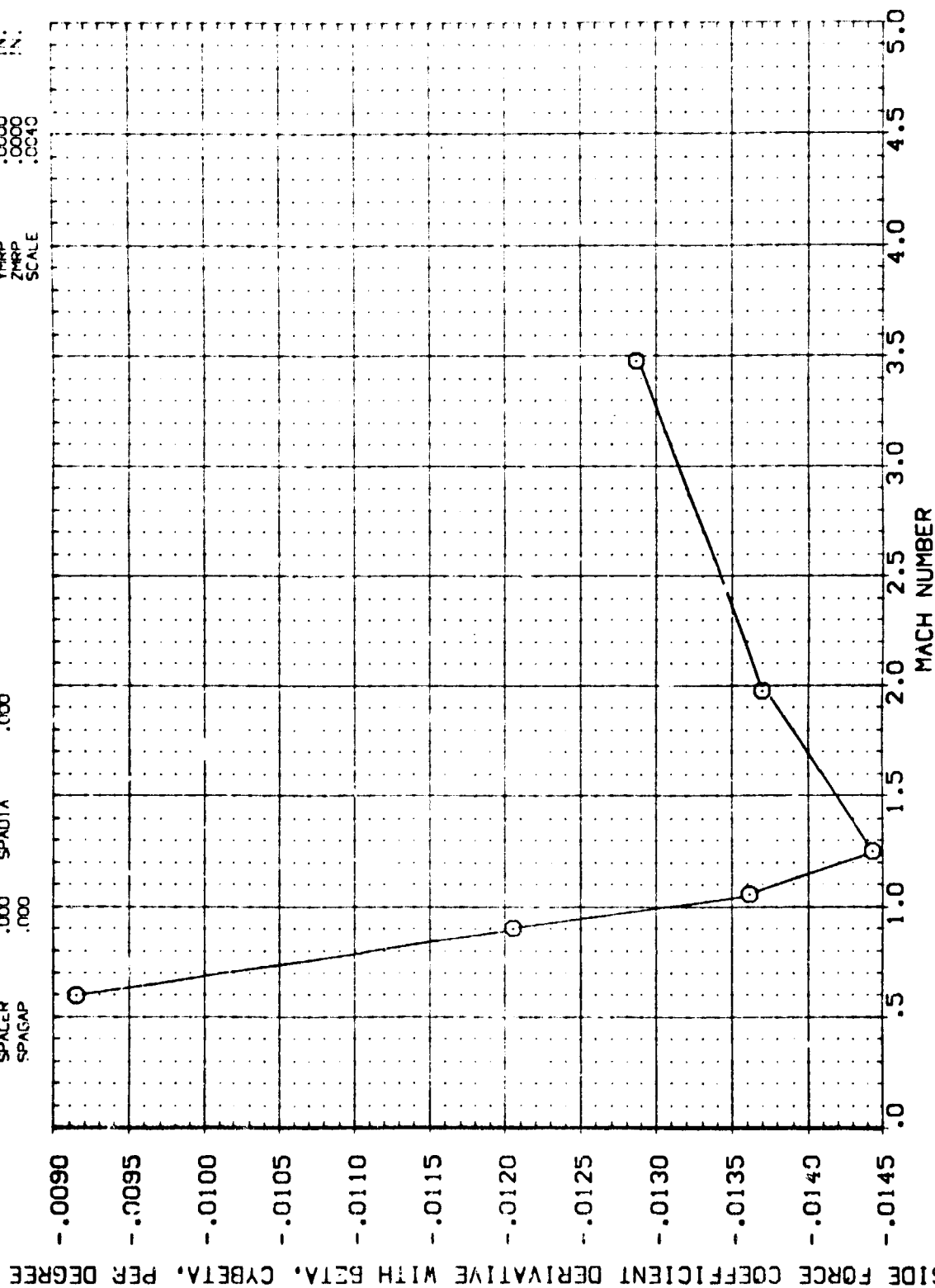


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)(U5)/(03)/(S3/2)/(S3/2) (A83T26)

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000
 DELTAZ .140
 X-SR3 .000
 SPACER .000
 SPAGAP .000
 CONFIG 201 000
 RUDDER .000
 ORBINC .500
 SPADIA .000

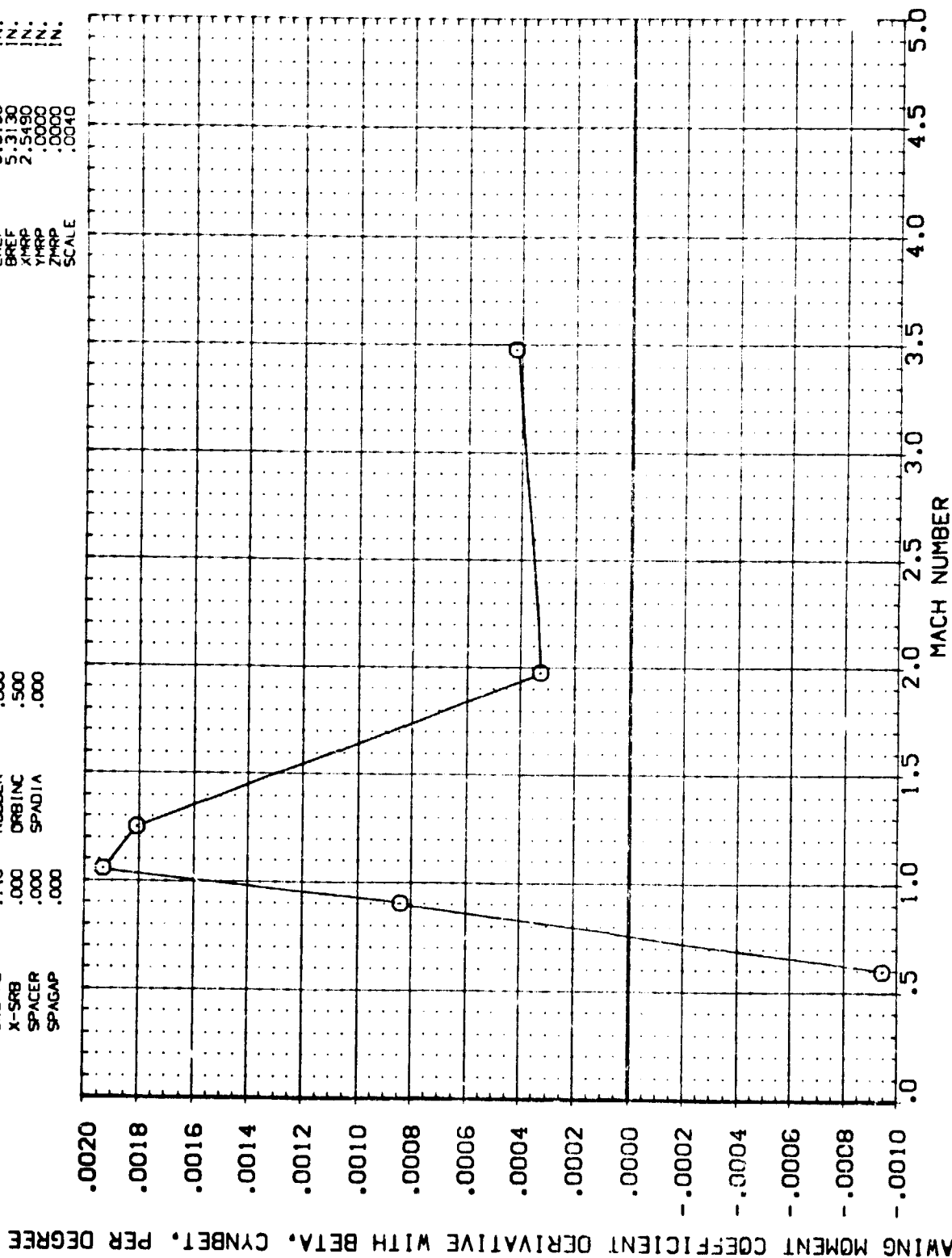


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(1A31F)(T9)(U5)/(03)/(S3/2)/(S3/2) (A83T26)

REFERENCE INFORMATION
 SREF 5.1980 SO: IN
 LREF 5.3130 IN:
 BREF 5.3130 IN:
 XMRP 2.5490 IN:
 YMRP .0000 IN:
 ZMRP .0000 IN:
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000 CONFIG 201.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBINC .500
 SPACER .000 SPADIA .000
 SPAGAP .000



STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

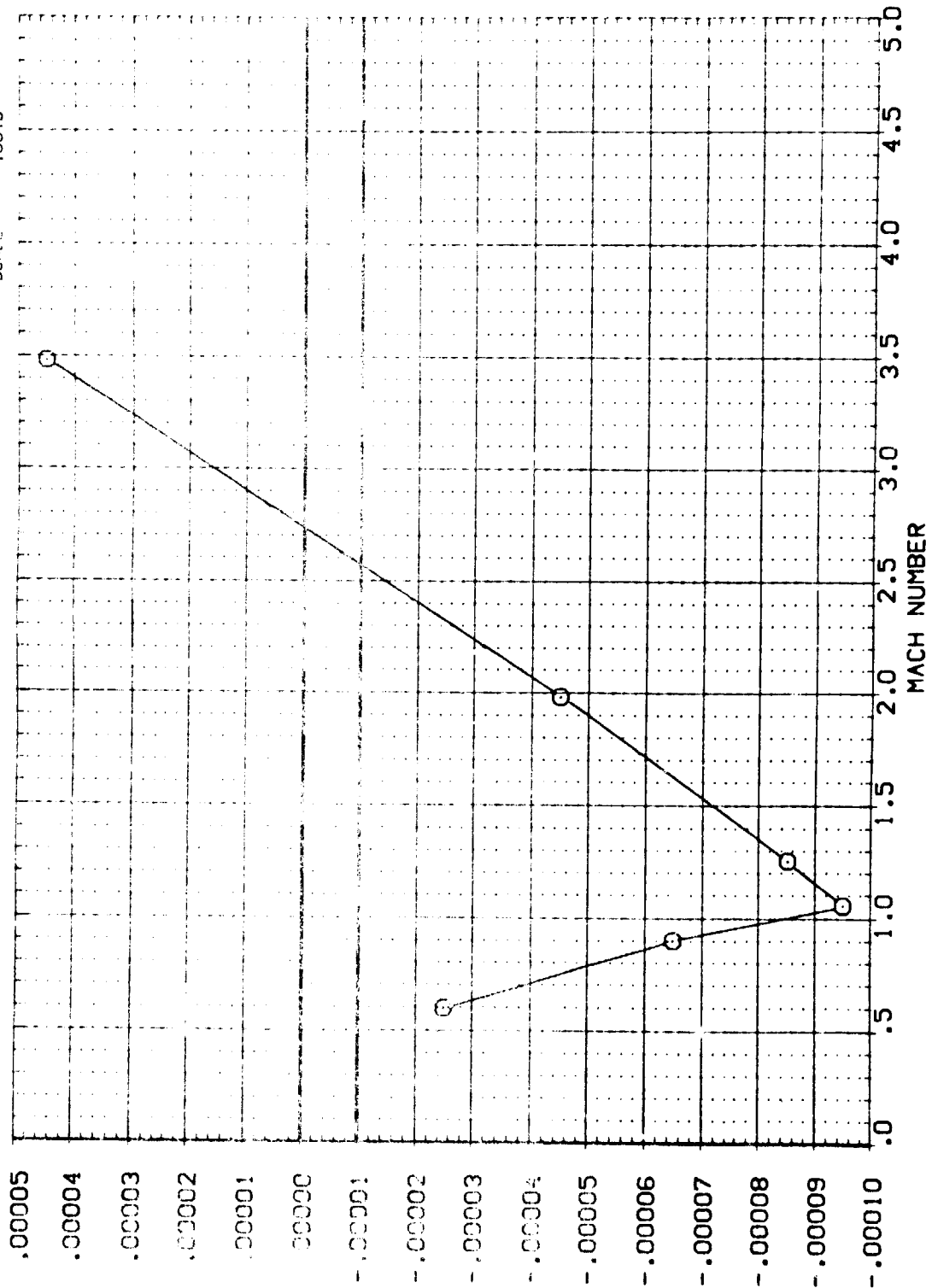
MSFC 570(1A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)

(A83T26)

PARAMETRIC VALUES
 ALPHA .000 CONF IG 201.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBIT NC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 YMRP 2.5460
 ZMRP .0000
 SCALE .0040

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CUBIC, PER DEGREE

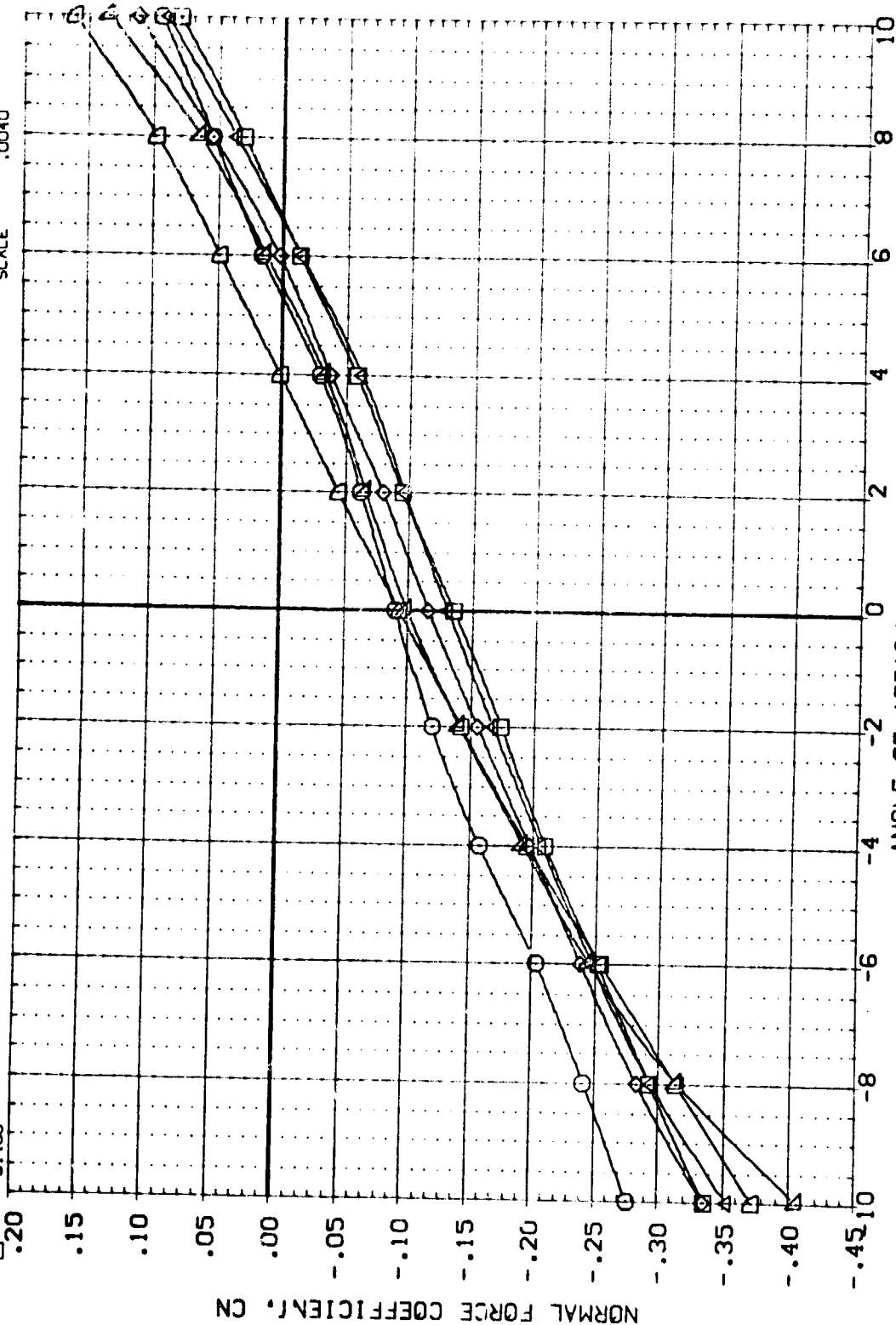


STABILITY CHARACTERISTICS - (T9)(U5) IN PRESENCE OF (03)/(S3/2)/(S3/2)

MSFC 570(IA31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(C83T34)

SYMBOL	MACH	BETA	DELTA Z	CONF IG	PARAMETRIC VALUES	SREF	REFERENCE INFORMATION	SO: IN
□	.592	.000	.140	RUDER	.000	6.1980	L-REF	5.3130
◇	.902	.000	.140	RUDER	.000	5.3130	B-REF	2.5490
△	1.048	.000	.000	DRB INC	.000	.0000	XMRP	.0000
▽	1.244	.000	.000	SPADIA	.000	.0000	YMRP	.0000
△	1.969	.000	.000	SPAGAP	.000	.0000	ZMRP	.0000
▽	3.480					.0040	SCALE	

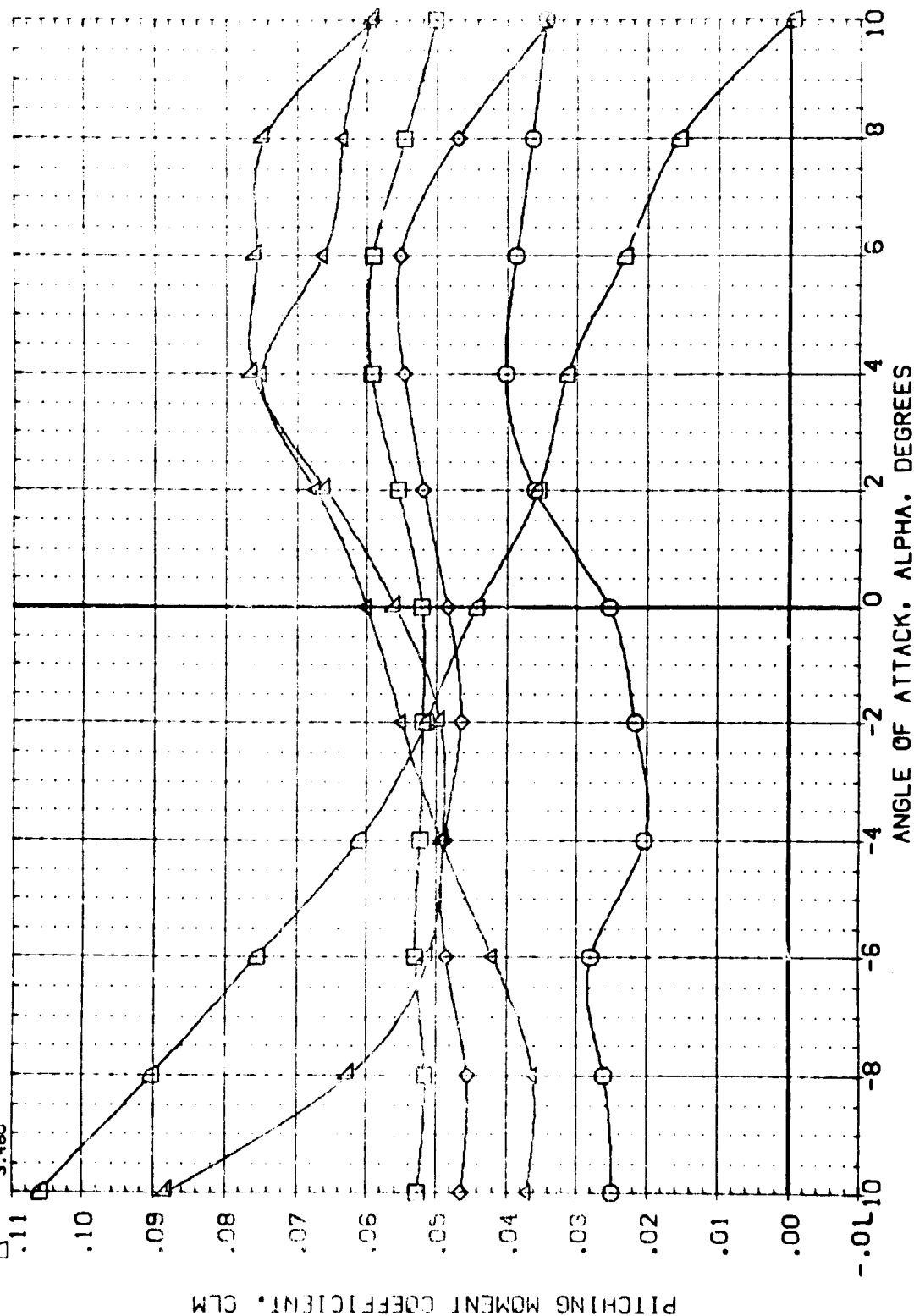


STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

(C83T34)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

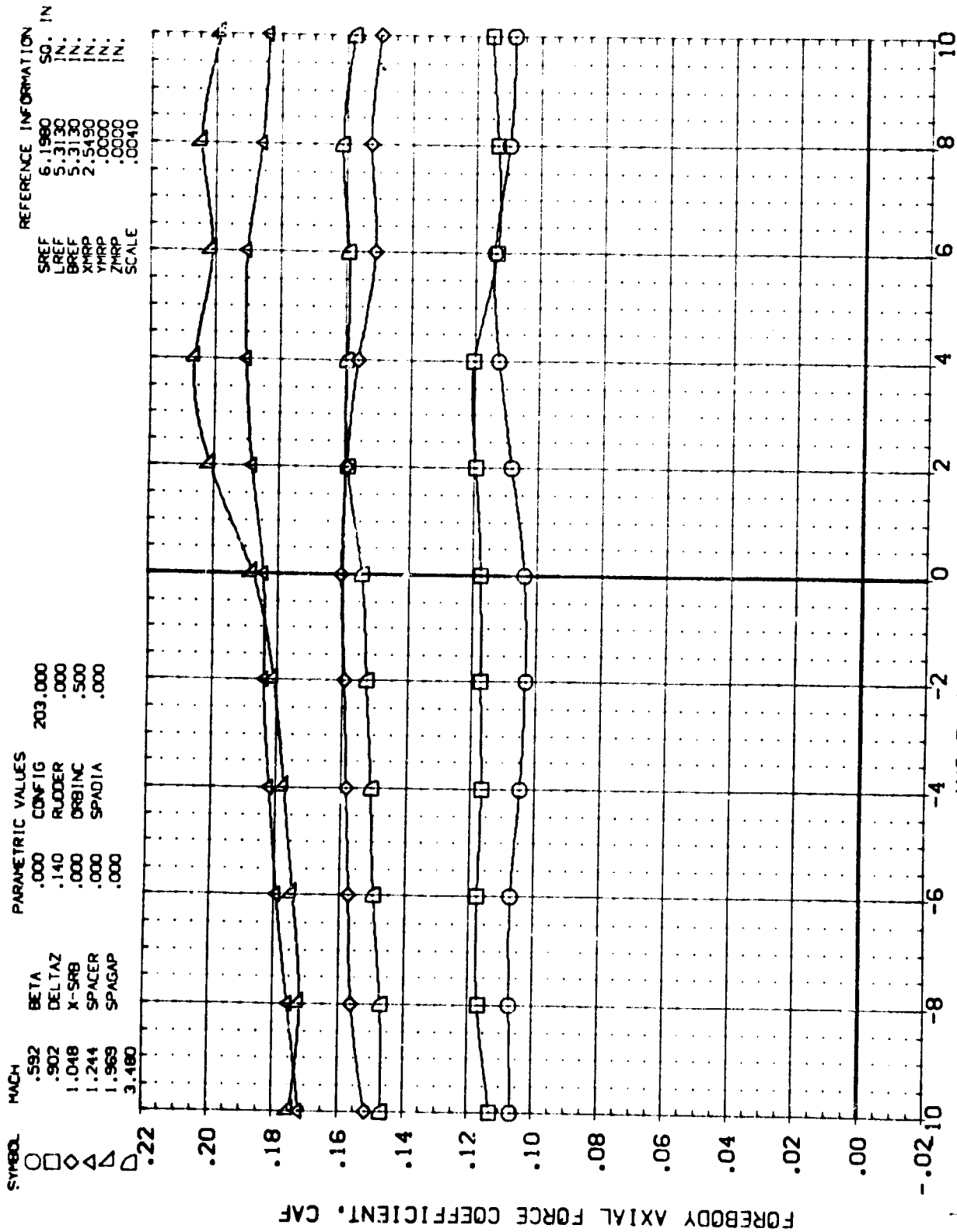
SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
□	0.592	BETA	.000	CONF IG	203.000	SREF	6.1980	SREF	6.1980	S3. 1N	
□	.902	DELTA Z	.140	RUDDER	.000	LREF	5.3130	LREF	5.3130	IN.	
◇	1.048	X-SRB	.000	ORBIT	.000	BREF	5.3130	BREF	5.3130	IN.	
△	1.244	SPACER	.000	SPADIA	.000	XMRP	2.5490	XMRP	2.5490	IN.	
▽	1.969	SPAGAP	.000			YMRP	.0000	YMRP	.0000	IN.	
○	3.480					ZMRP	.0000	ZMRP	.0000	IN.	
						SCALE	.0040	SCALE	.0040		



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(IA31F)(T9)(U5)(S3/2)/(03)/(S3/2)

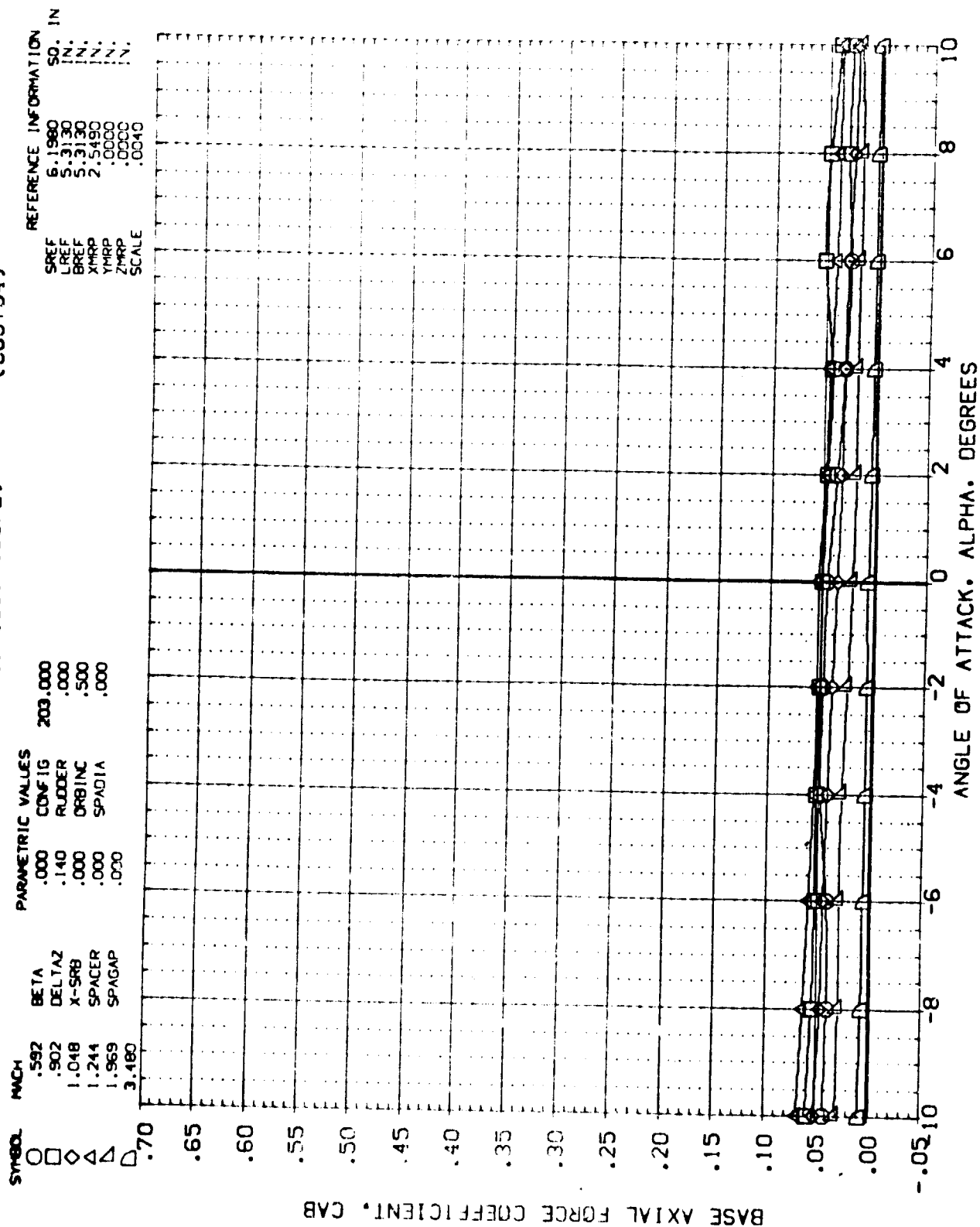
(C83T34)



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(C83T34)

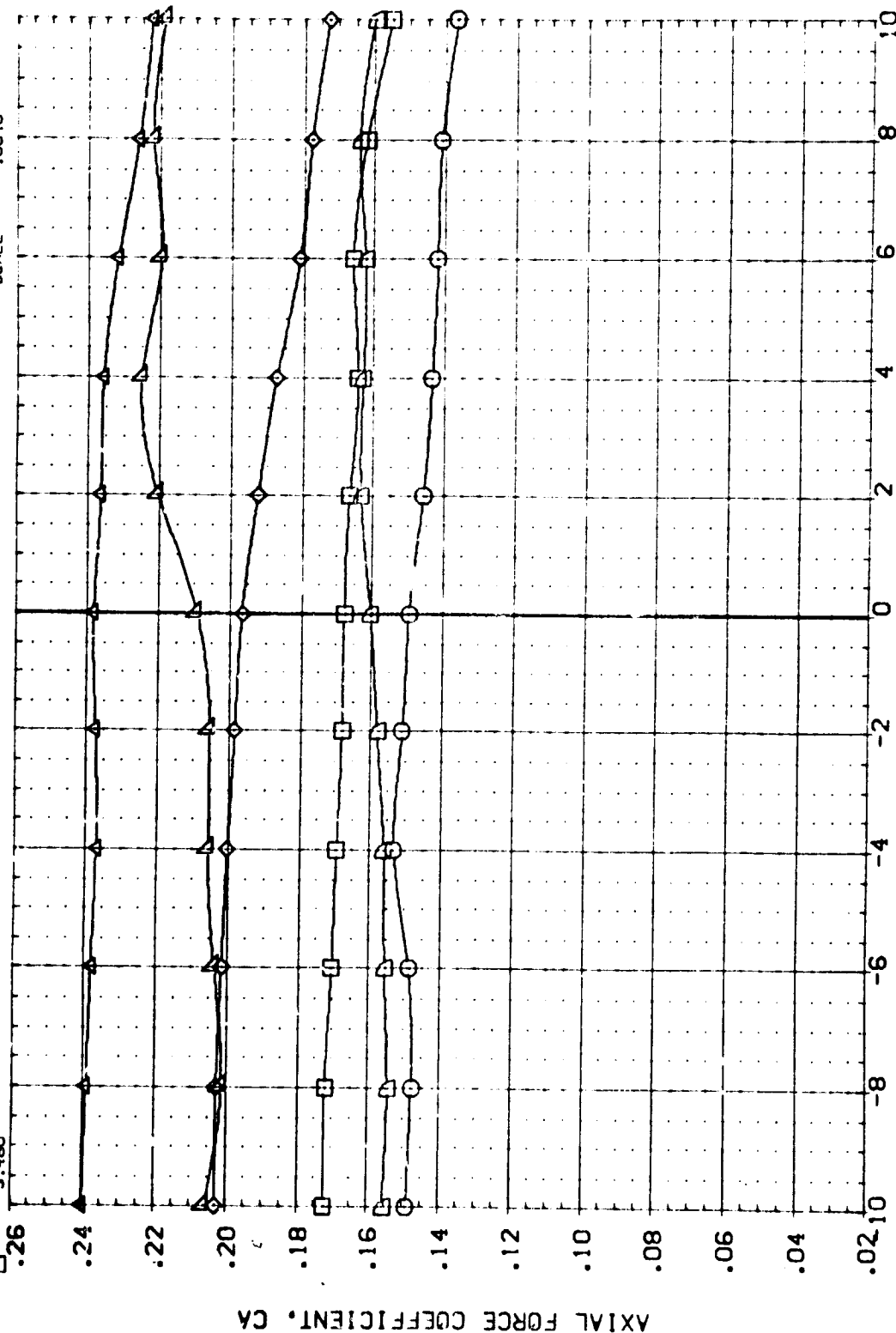


STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(C83134)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.592	DELTA	SREF
□	.502	DELTAZ	UREF
◇	1.048	X-SRB	BREF
△	1.244	SPACER	XMRP
▽	1.969	SPAGAP	YMRP
▽	3.480		ZMRP
			SCALE
			SO. IN
			IN.
			IN.
			IN.
			IN.
			IN.



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(IA31F)(T9)(U5)(S3/2)/(03)/(S3/2) (C83T34)

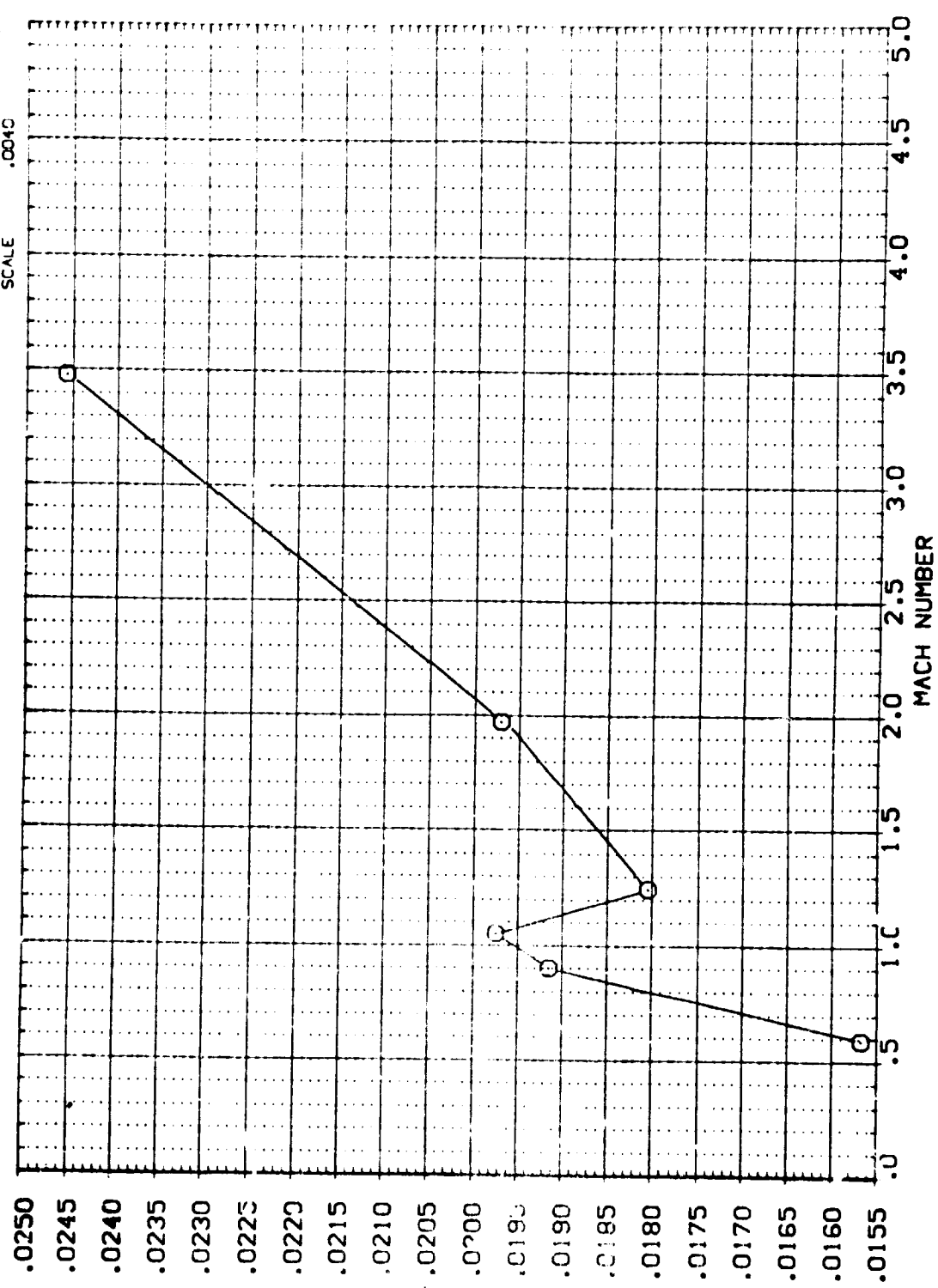
PARAMETRIC VALUES

BETA	.000	CONFIG	20J.000
DELTA Z	.140	RUDDER	.000
X-SRB	.000	ORBITIC	.500
SPACER	.000	SPADIA	.000
SPAGAP	.000		

REFERENCE INFORMATION

SREF	6.1980	SO. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
YMRP	2.5490	IN.
ZMRP	.0000	IN.
SCALE	.0040	

NORMAL FORCE COEFFICIENT DERIVATIVE WITH ALPHA, CNALFA, PER DEGREE



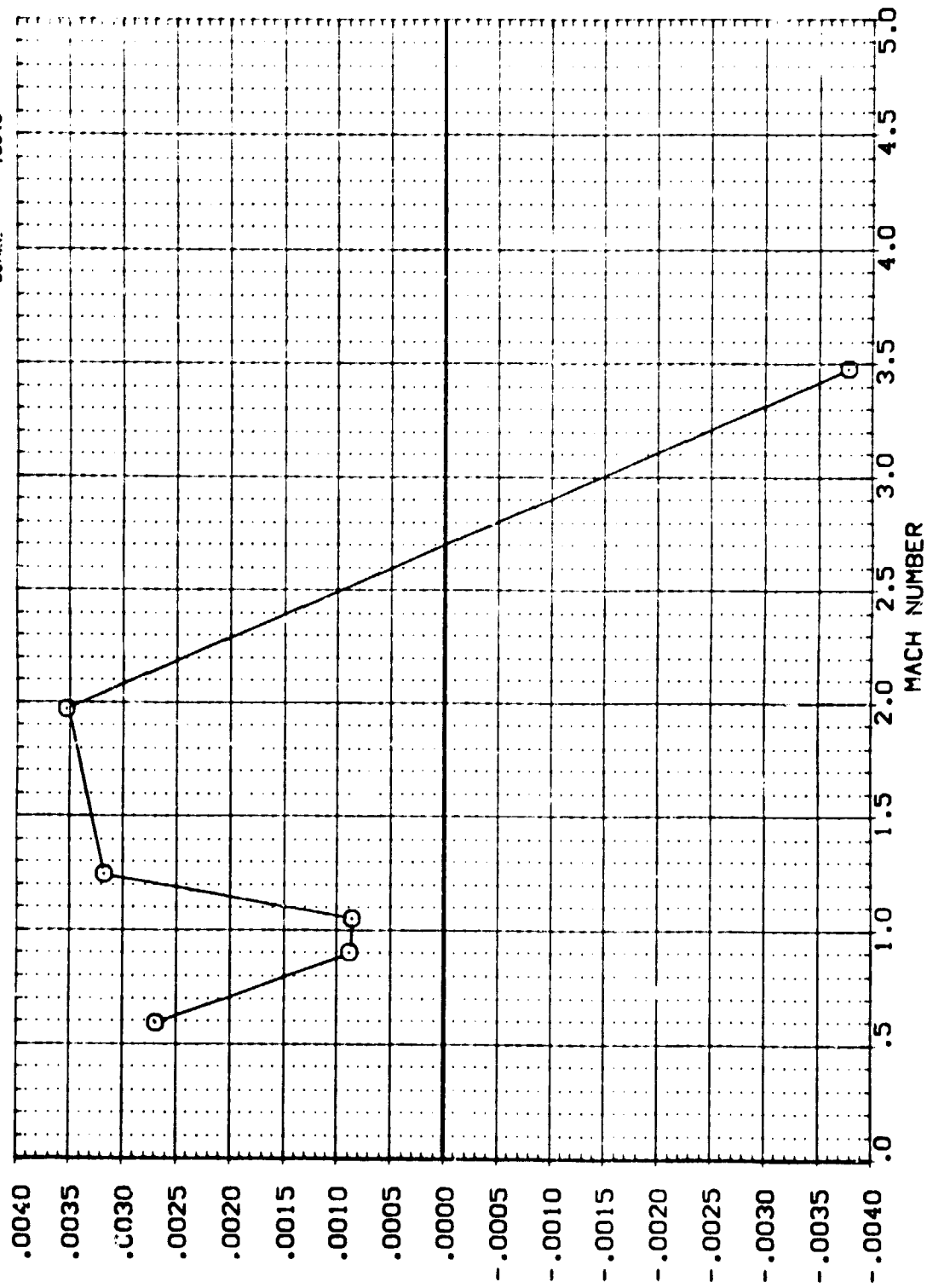
STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2) (C83T34)

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040

PARAMETRIC VALUES
 BETA .000 CONF IG 203.000
 DELTA Z .140 RUDDER .000
 X-SRB .000 ORBIT INC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

PITCHING MOMENT COEFFICIENT DERIVATIVE WITH ALPHA, CLMWF, F-LK DEGREE



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(C83T34)

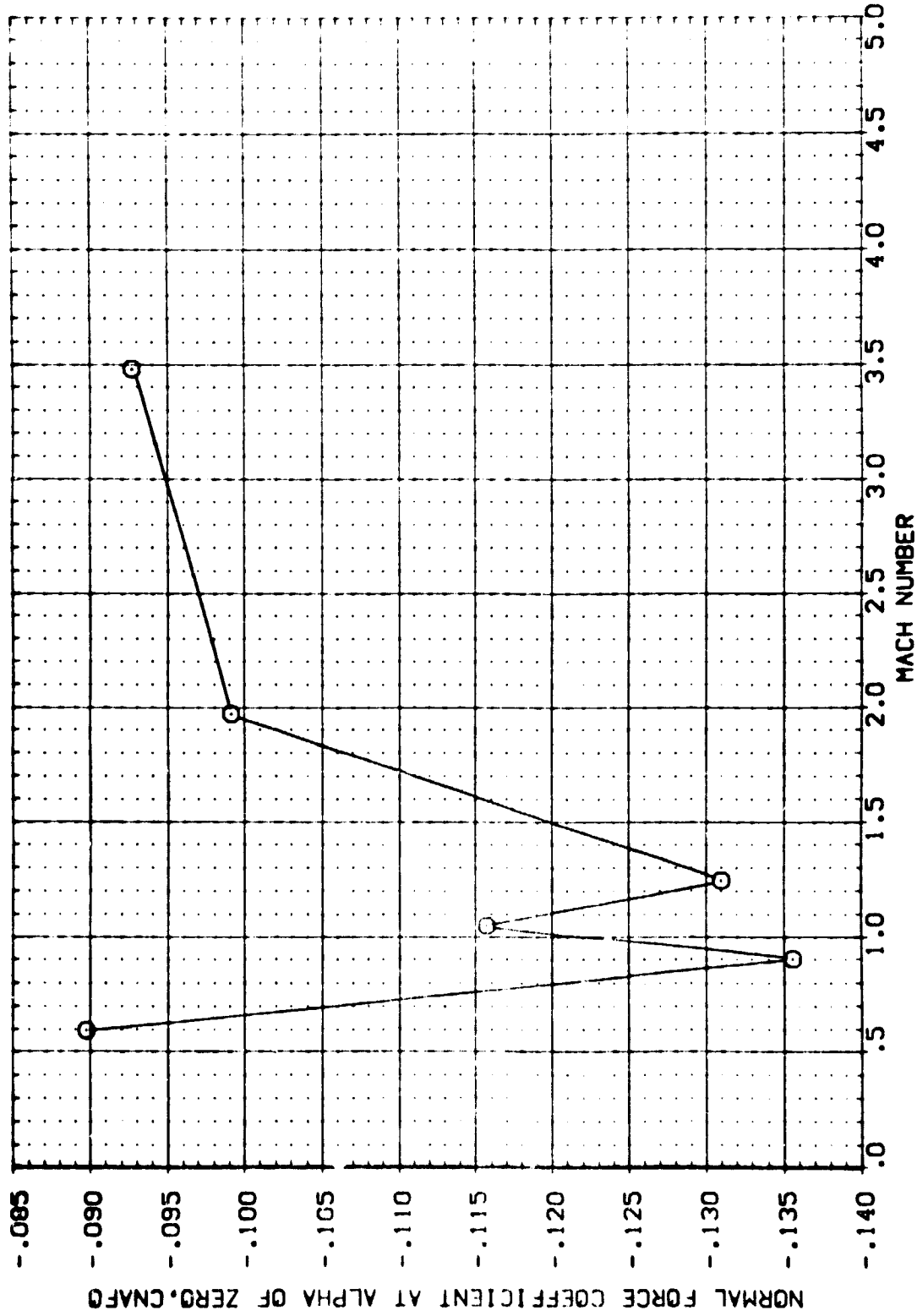
PARAMETRIC VALUES

BETA
DELTAZ
X-SRB
SPACER
SPAGAP

.000 .140 .000 .000 .000
CONF IG RUDDER ORBINC SPADIA
.203 .000 .500 .000 .000

REFERENCE INFORMATION

SREF 6.1980 SQ. IN
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5490 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0040



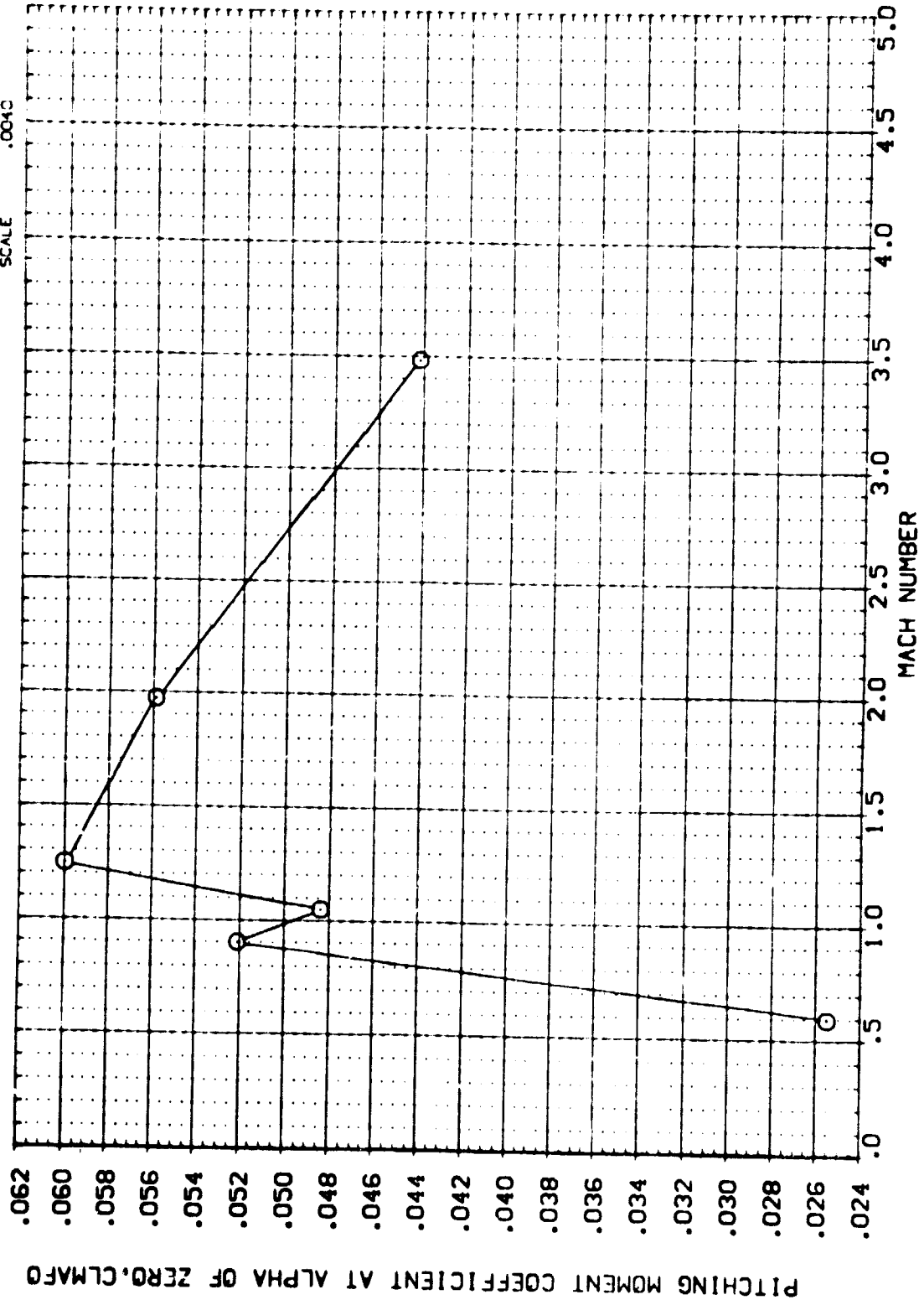
STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(IA31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(C83T34)

PARAMETRIC VALUES
 BETA .000 CONF IG 203.000
 DELTA Z .140 RUDDER .000
 X-SRS .000 ORB INC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

(C83T34)

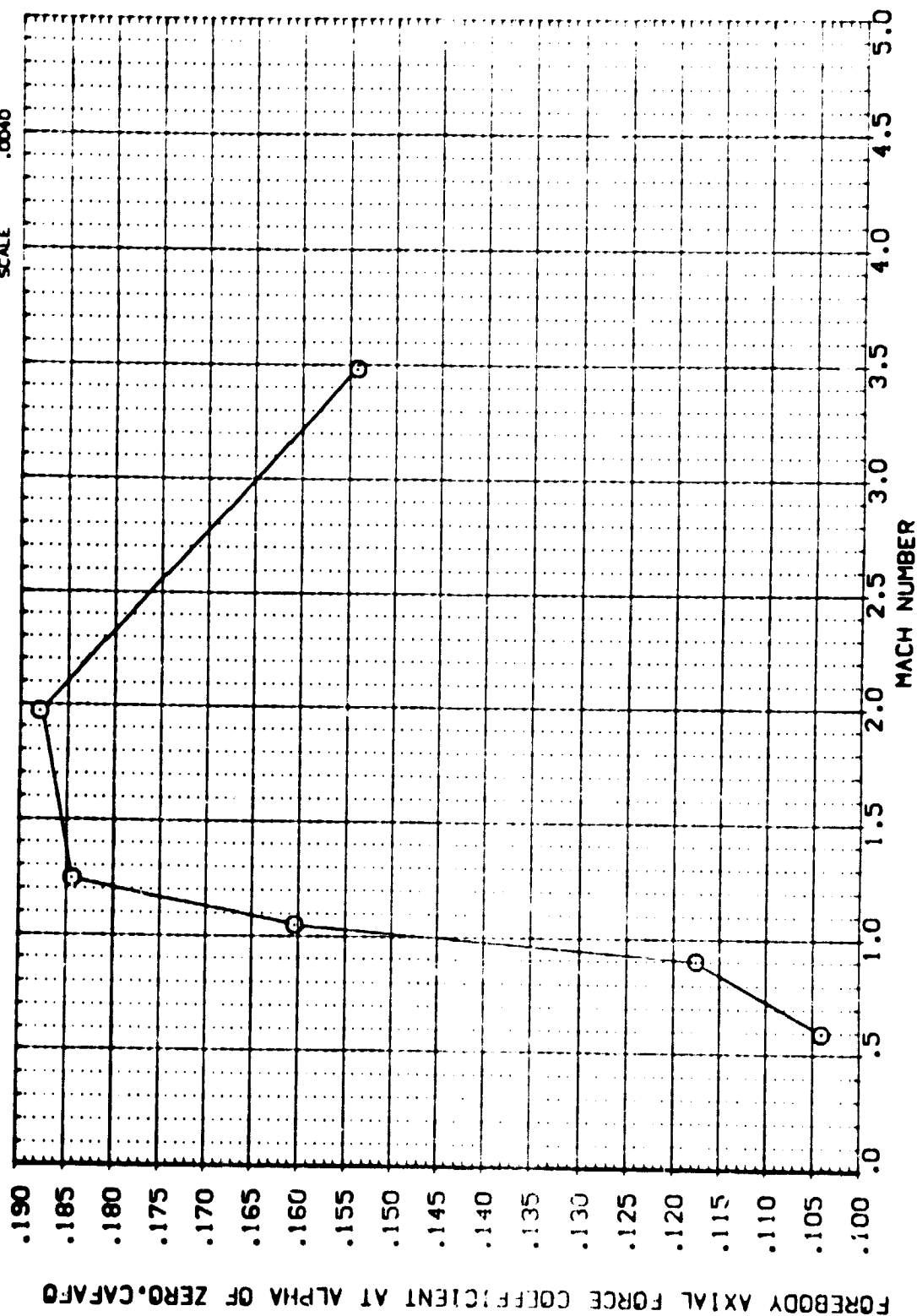
MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

PARAMETRIC VALUES

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DELTA Z	.140	RUDDER	.000
X-S98	.000	ORBITAL	.500
SPACER	.000	SPADIA	.000
SPAGAP	.000		

REFERENCE INFORMATION

SREF	6.1980	SO.	IN
LREF	5.3130	IN.	IN.
BREF	5.3130	IN.	IN.
XREF	2.5490	IN.	IN.
YREF	.0000	IN.	IN.
ZREF	.0000	IN.	IN.
SCALE	.0000		



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

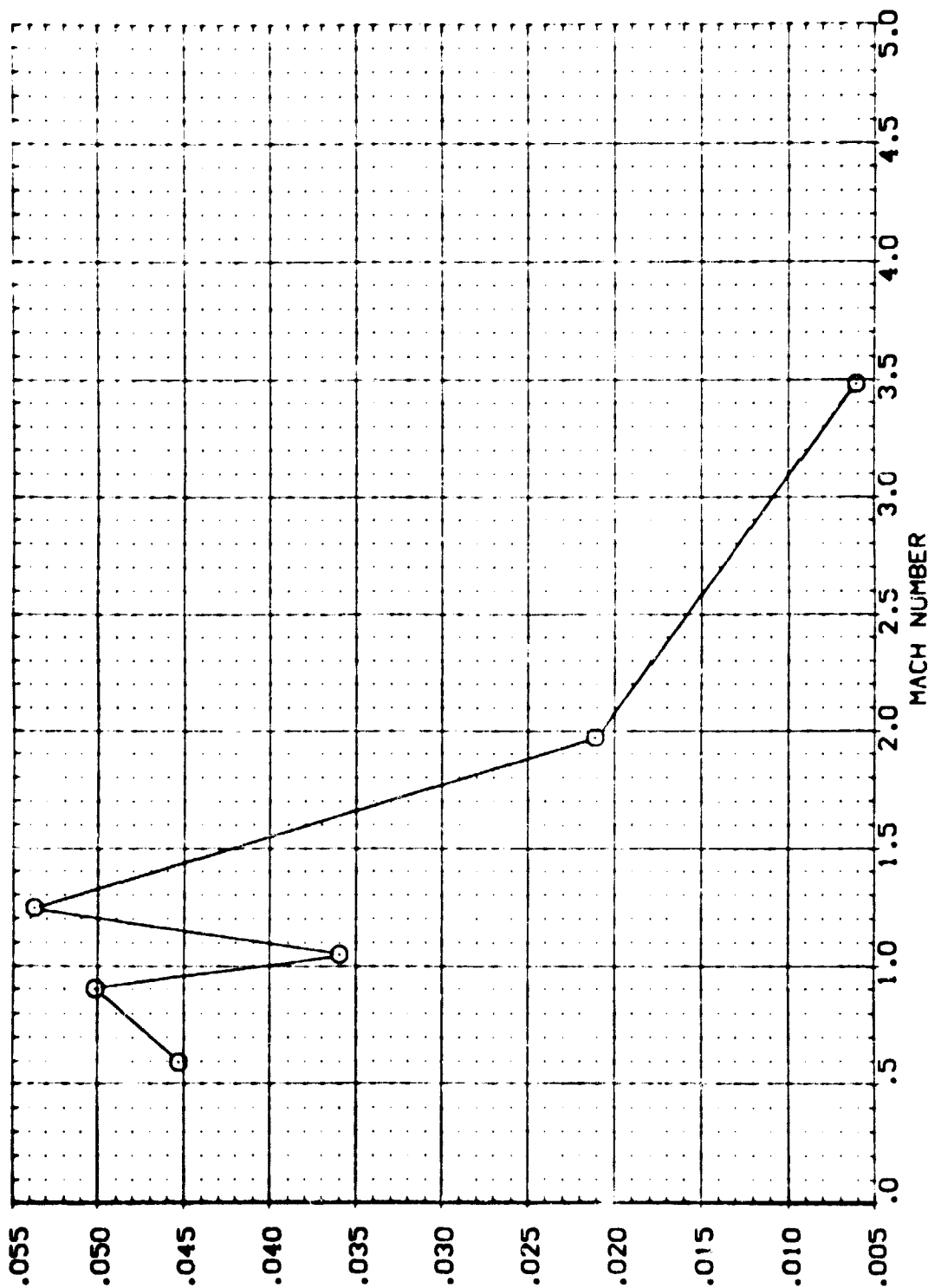
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MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2) (C83T34)

PARAMETRIC VALUES
 BETA .000 CONFG 203.000
 DELTAZ .140 RUDDER .000
 X-SQB .000 ORBITC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040

BASE AXIAL FORCE COEFFICIENT AT ALPHA OF ZERO, CBAF0

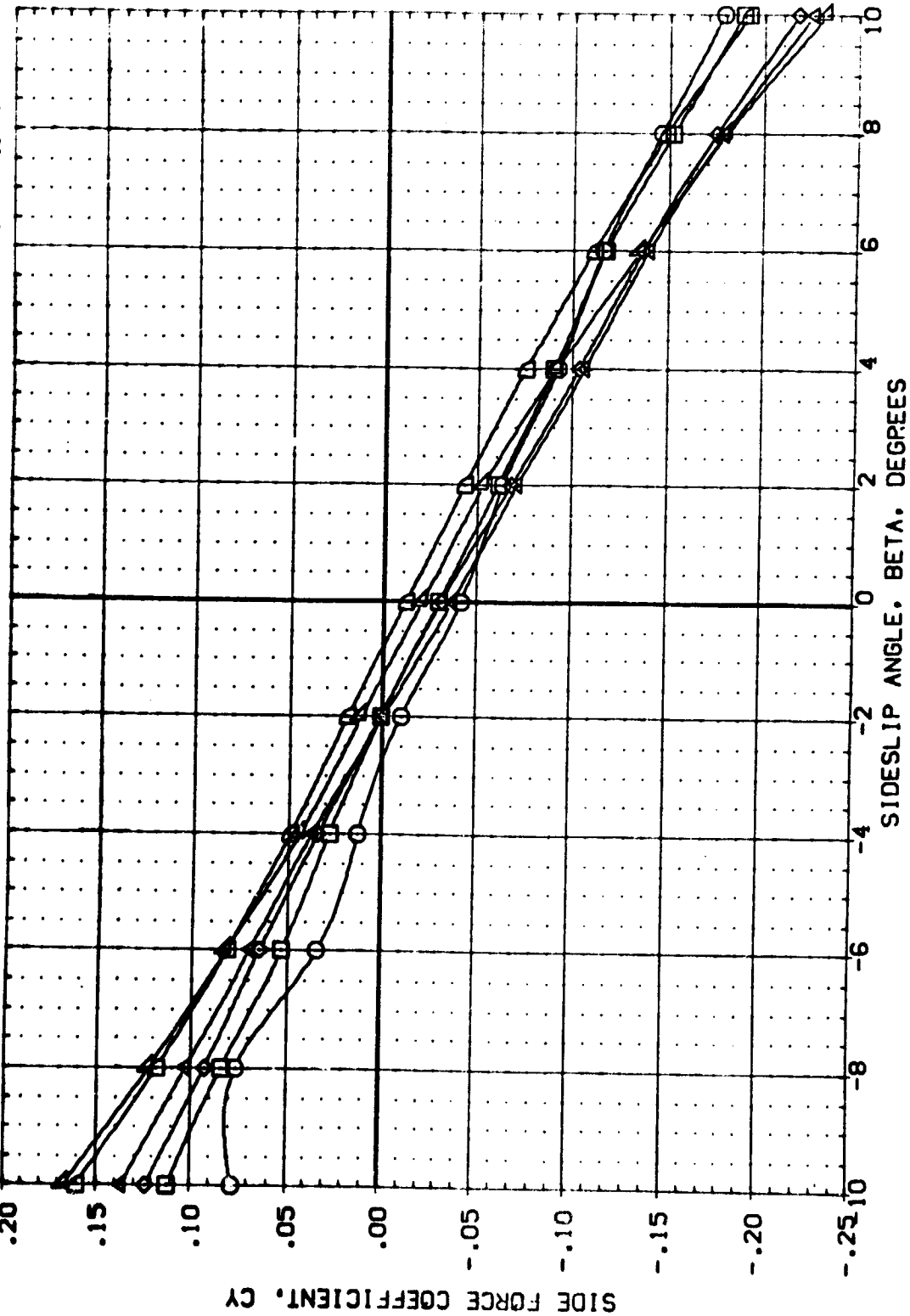


STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)



MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2) (A83T35)

PARAMETRIC VALUES		REFERENCE INFORMATION	
MACH	ALPHA	SREF	SO. IN
.580	.000	6.1980	IN.
.889	.140	5.3130	IN.
1.051	.000	5.3130	IN.
1.248	.000	5.3480	IN.
1.582	.000	.0000	IN.
3.160	.000	.0000	IN.
		SCALE	
			.0040

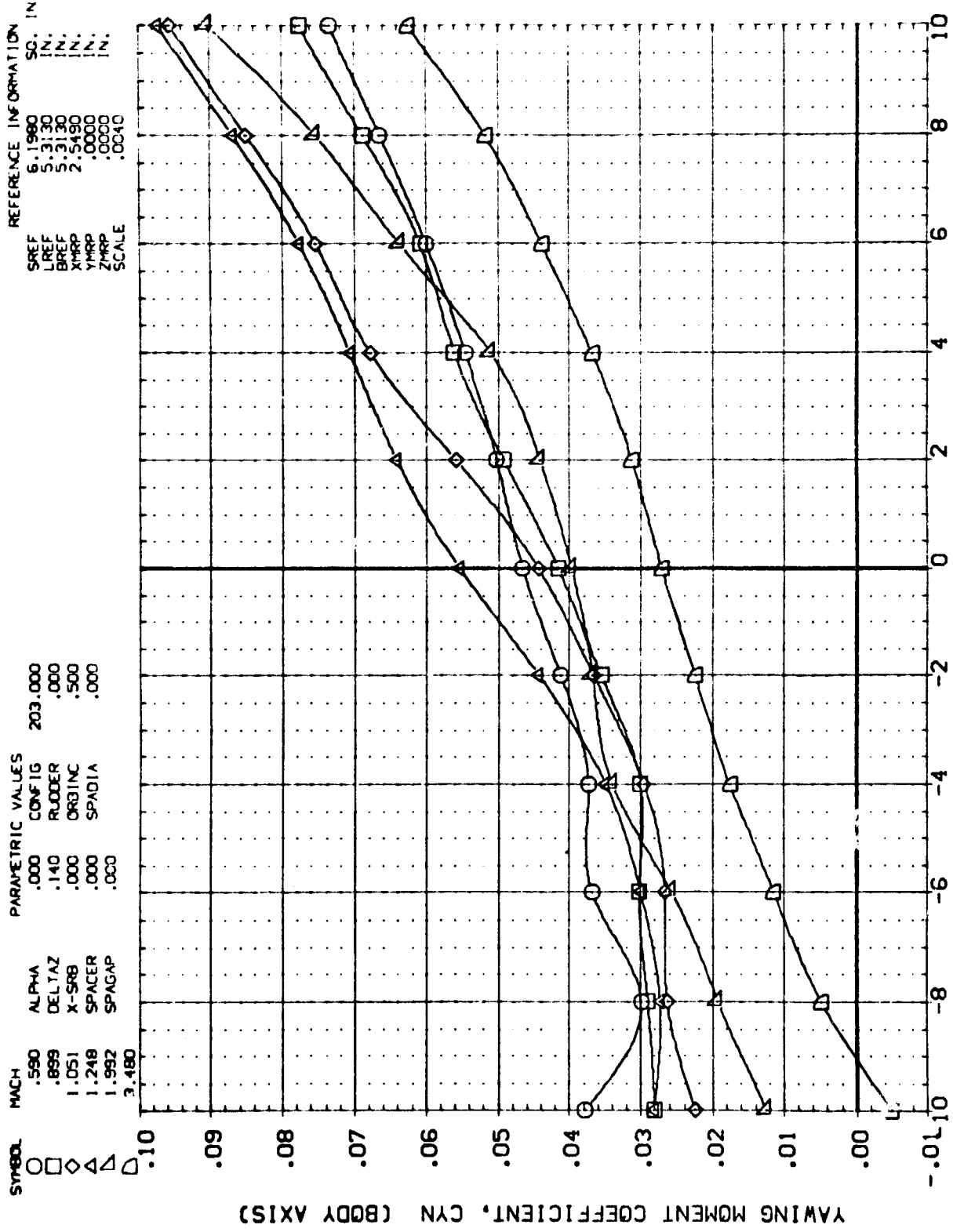


STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)



MSFC 570(IA31F)(T9)(U5)(S3/2)/(03)/(S3/2)

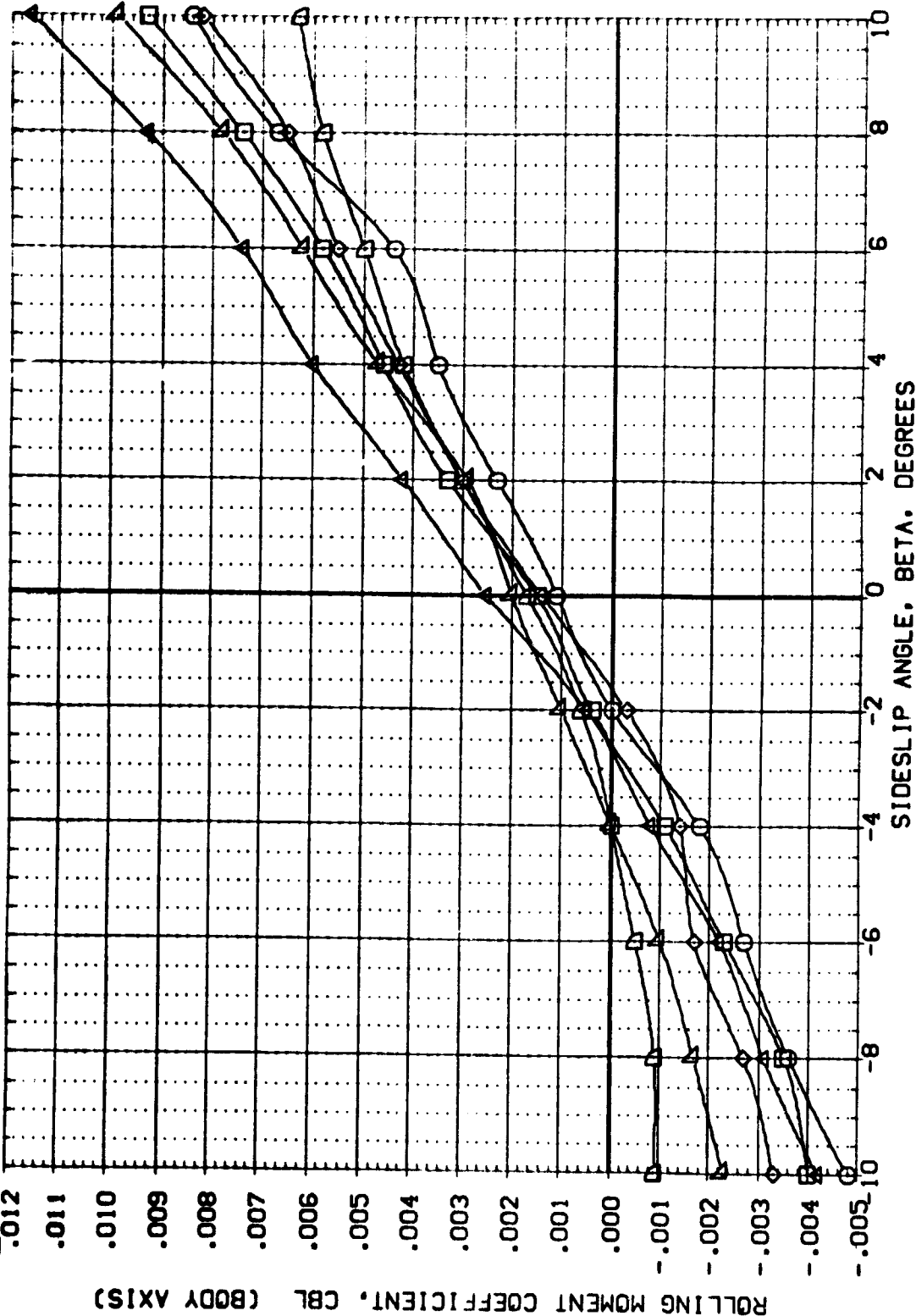
(A83T35)



STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

(A83T35)



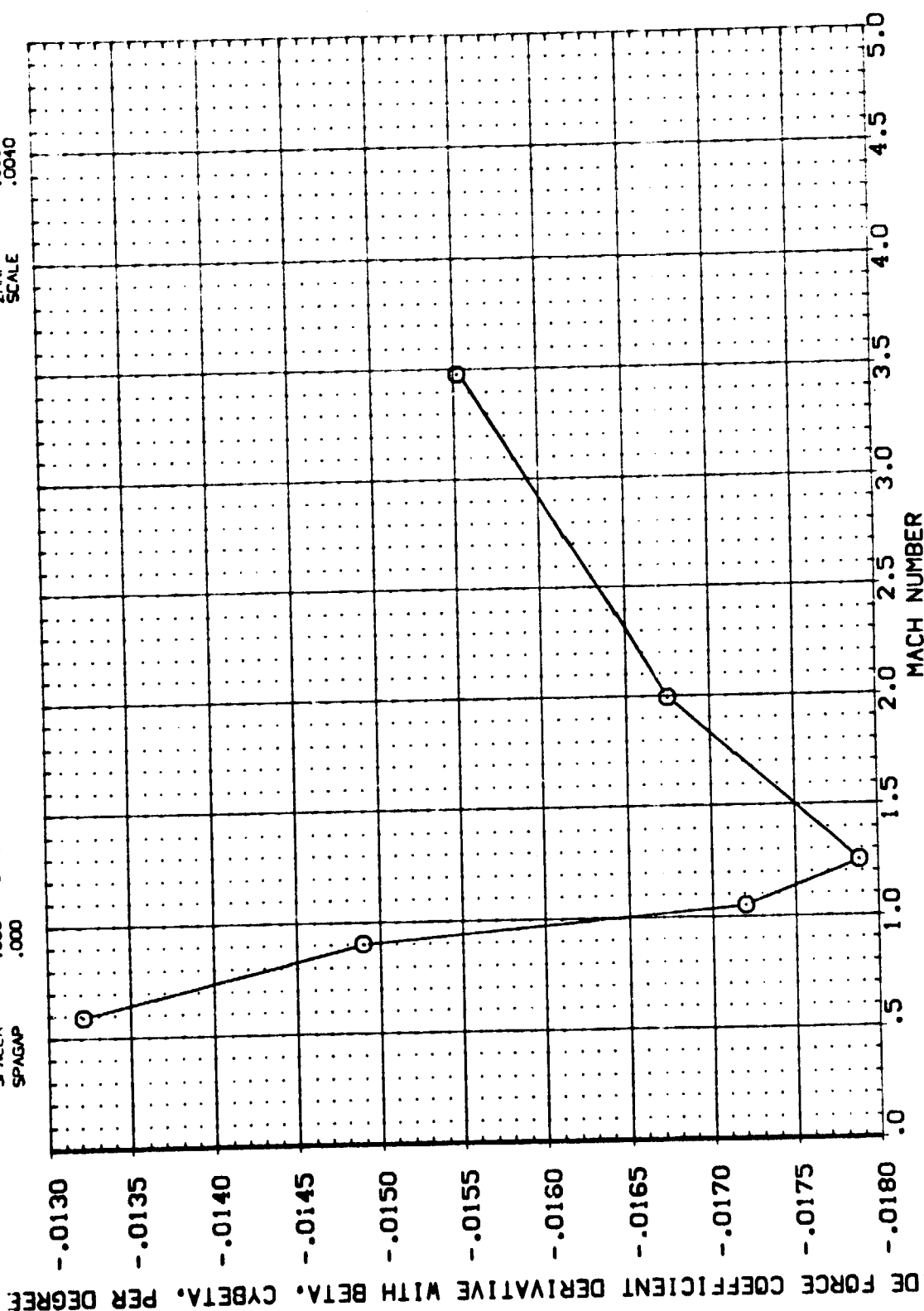
STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

(A83T35)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

REFERENCE INFORMATION
SREF 6.1990
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

PARAMETRIC VALUES
ALPHA .000 CONF IG 203.000
DELTA Z .140 RUDDER .000
X-SRB .000 ORBITAL .500
SPACER .000 SPADIA .000
SPAGAP .000

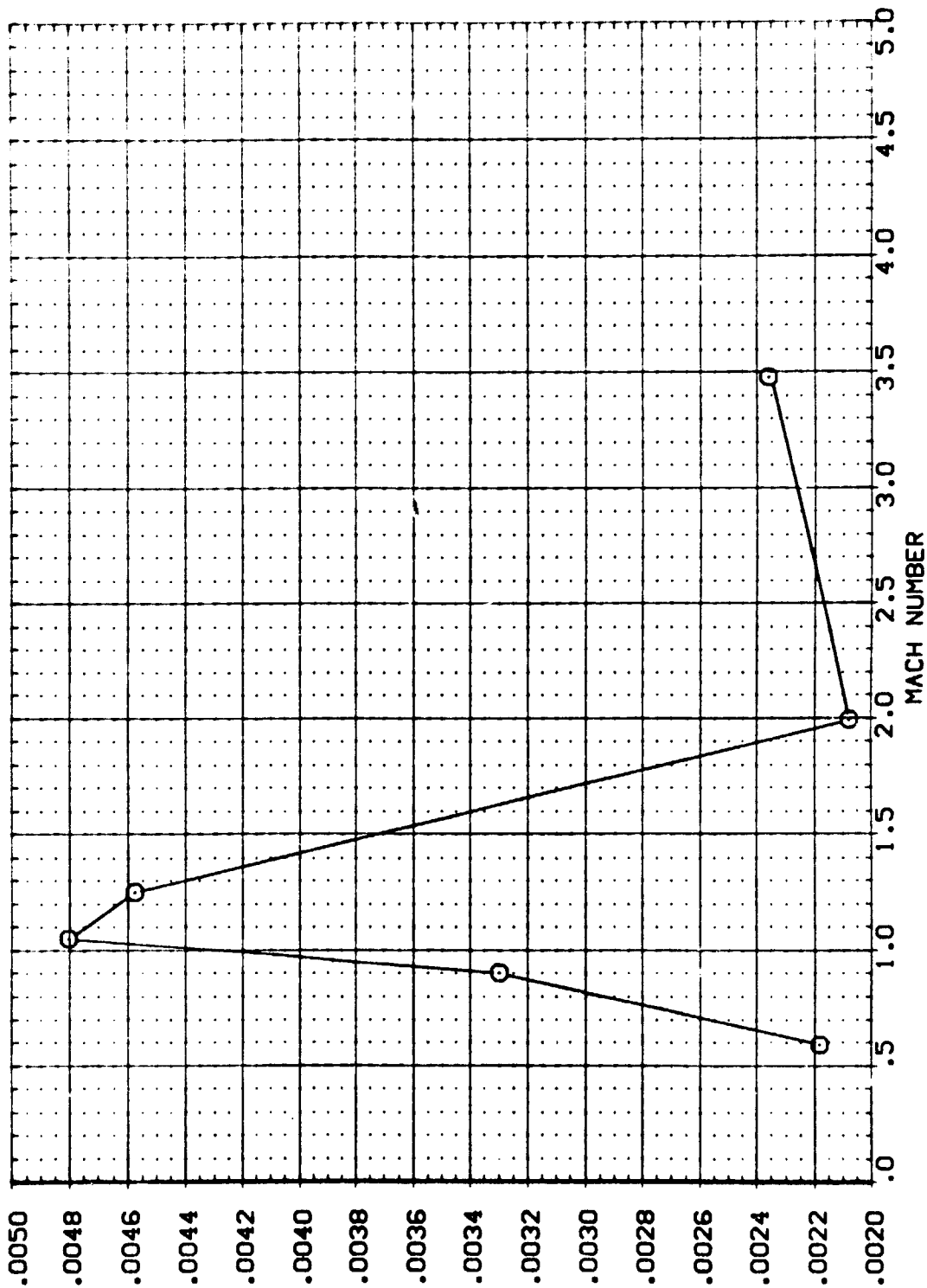


STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2) (A83T35)

PARAMETRIC VALUES		REFERENCE INFORMATION	
ALPHA	.000	SREF	6.1980
DELTA Z	.140	LREF	5.3130
X-SRB	.000	BREF	5.3130
SPACER	.000	XMRP	2.5490
SPAGAP	.000	YMRP	.0000
		ZMRP	.0000
		SCALE	.0040



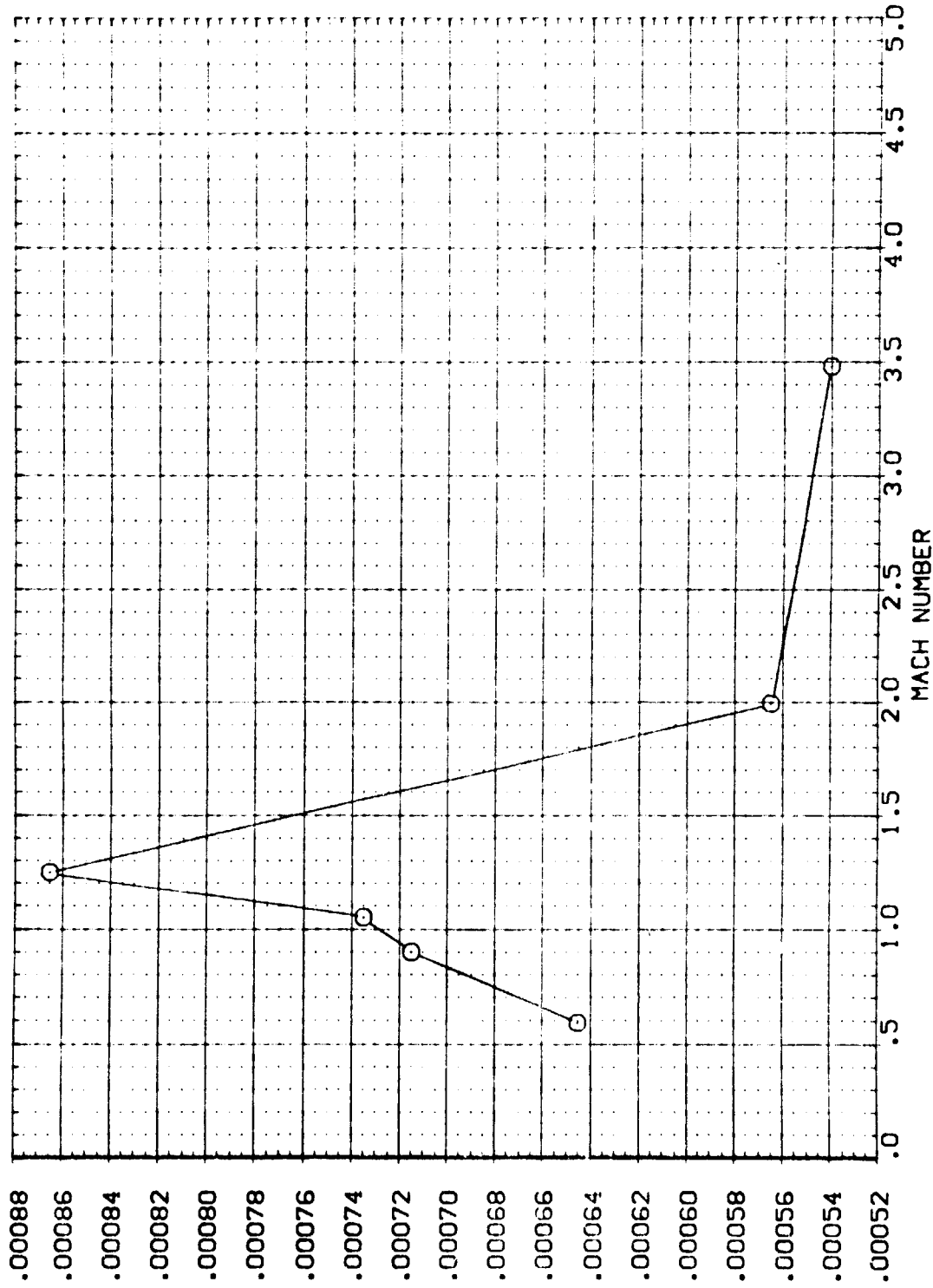
STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

(A83T35)

MSFC 570(1A31F)(T9)(U5)(S3/2)/(03)/(S3/2)

REFERENCE INFORMATION
SREF 6.1980
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

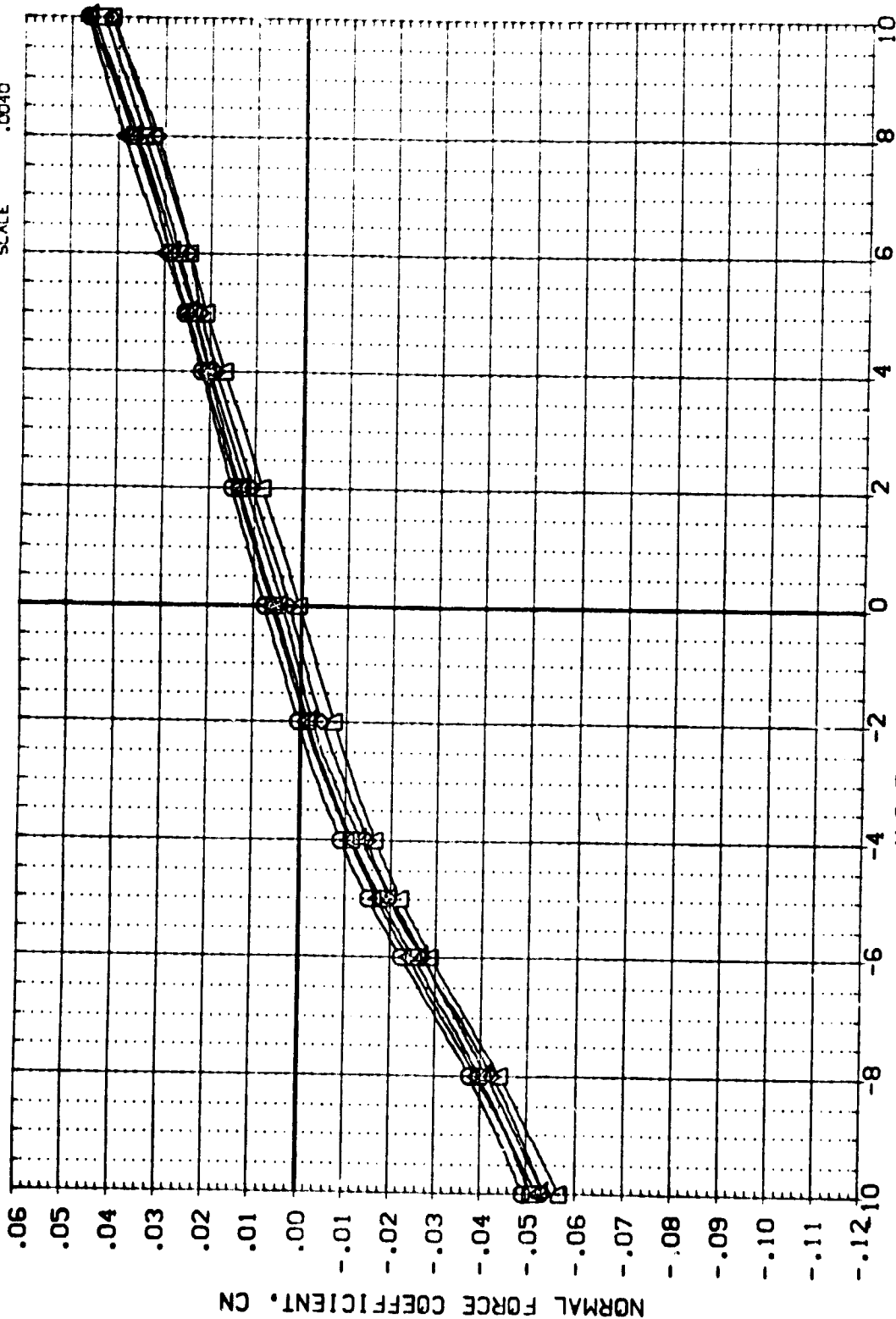
PARAMETRIC VALUES
ALPHA .000
DELTAZ .140
X-SRB .000
SPACER .000
SPAGAP .000
CONFIG 203.000
RUDDER .000
ORBITAL .500
SPADIA .000



ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

STABILITY CHARACTERISTICS - (T9)(U5)(S3/2) IN PRESENCE OF (03)/(S3/2)

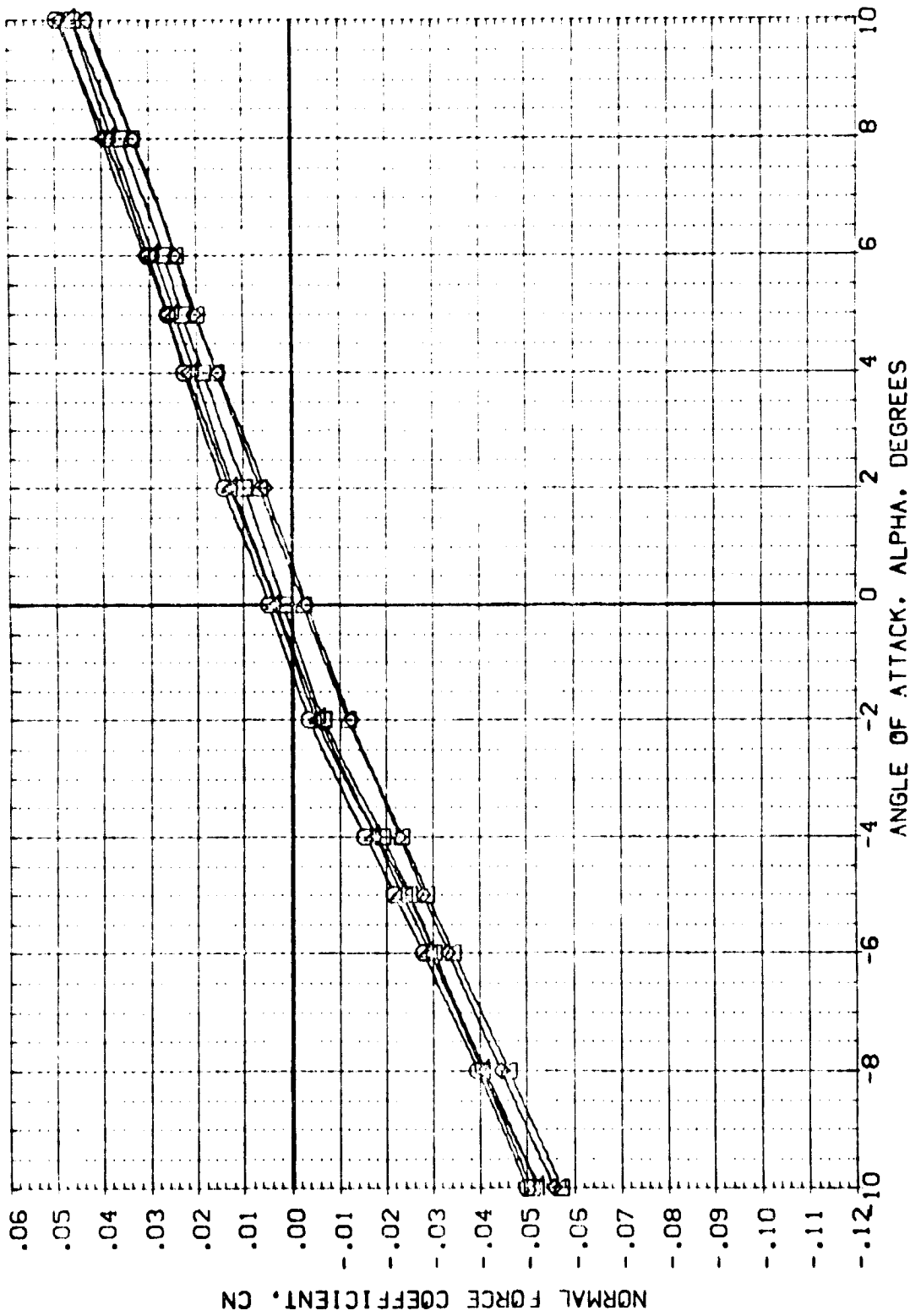
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A)MACH = .60

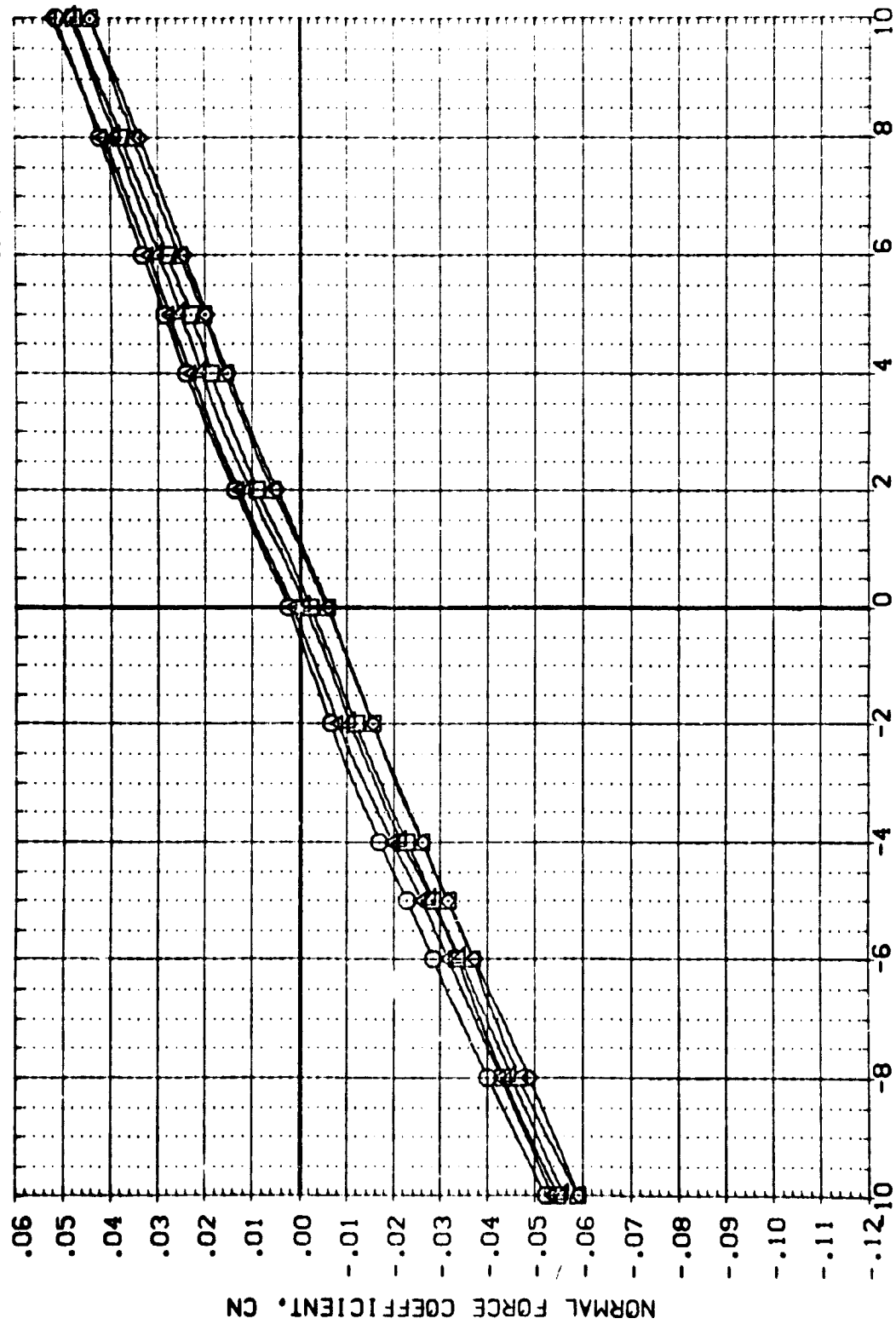
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SC. IN
(C83502)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83503)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83504)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83505)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000
(C83506)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 5701(A3.F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040

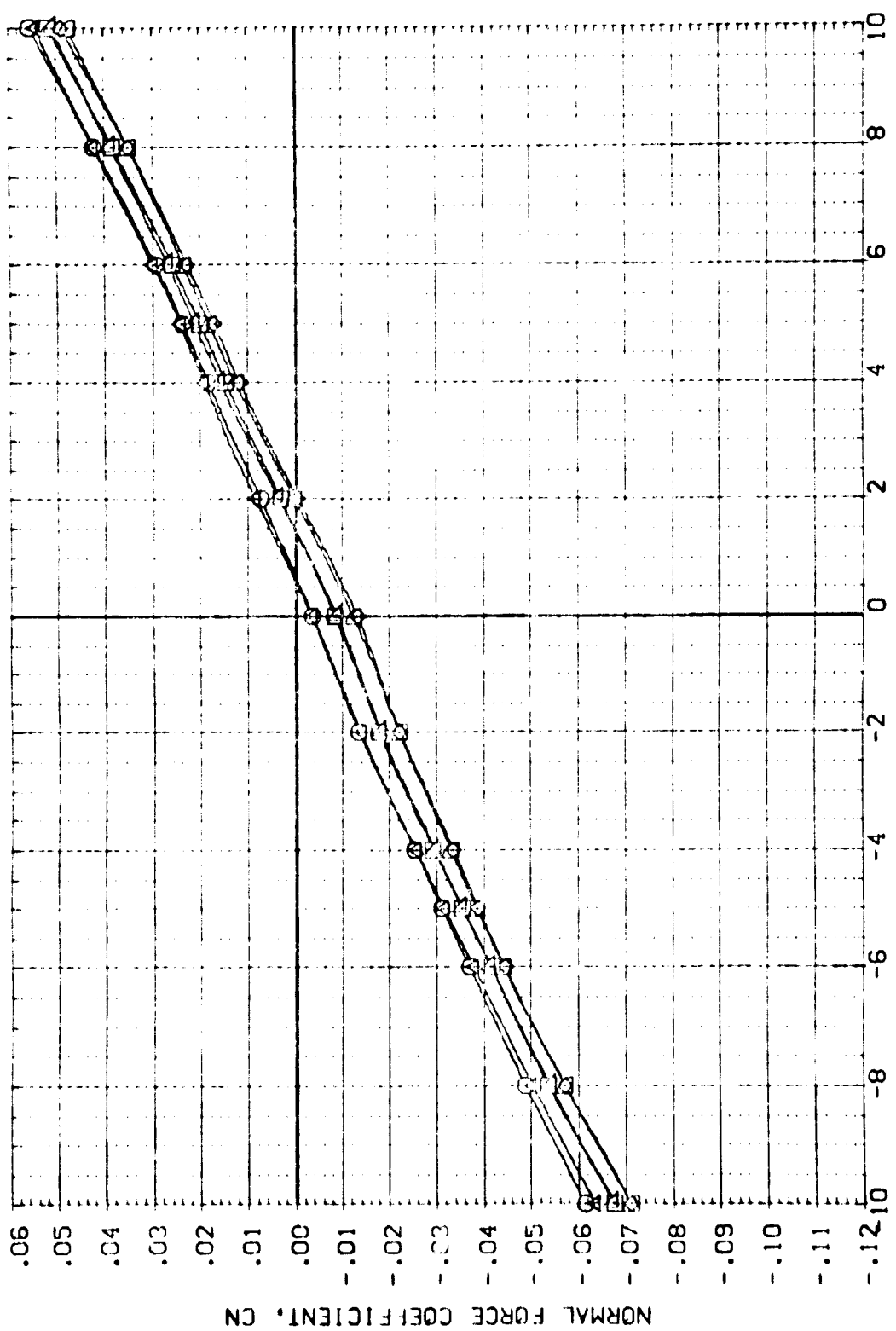


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = .90

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(S3S01)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	-.500	.140	SREF 9720
(S3S02)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	.500	.140	LREF 53130
(S3S03)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	1.500	.140	BREF 53130
(S3S04)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	-.500	.280	XMRP 2
(S3S05)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	.500	.280	YMRP .0000
(S3S06)	MSFC 570((A3)F)((S3/2)/((03)/((T9)/((S3/2))	.000	1.500	.280	ZMRP .0040
					SCALE

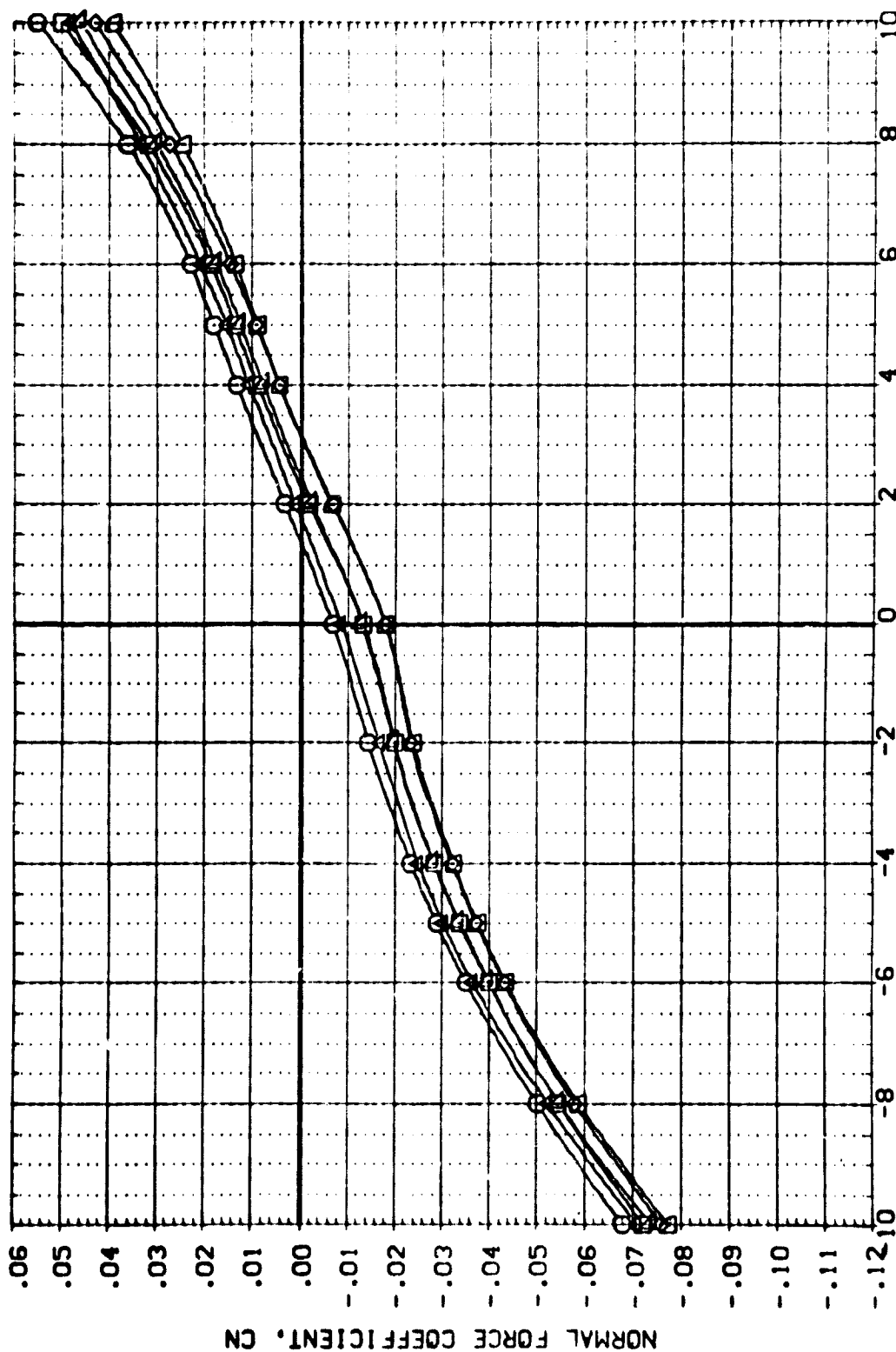


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/((T9)/((S3/2))

(0)MACH = 1.05

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC S70(IA3IF)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 IN.
(C83502)	MSFC S70(IA31)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC S70(IA3IF)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.140	BREF 5.3130 IN.
(C83504)	MSFC S70(IA3IF)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC S70(IA3IF)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC S70(IA3IF)(S3/2)(031)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040

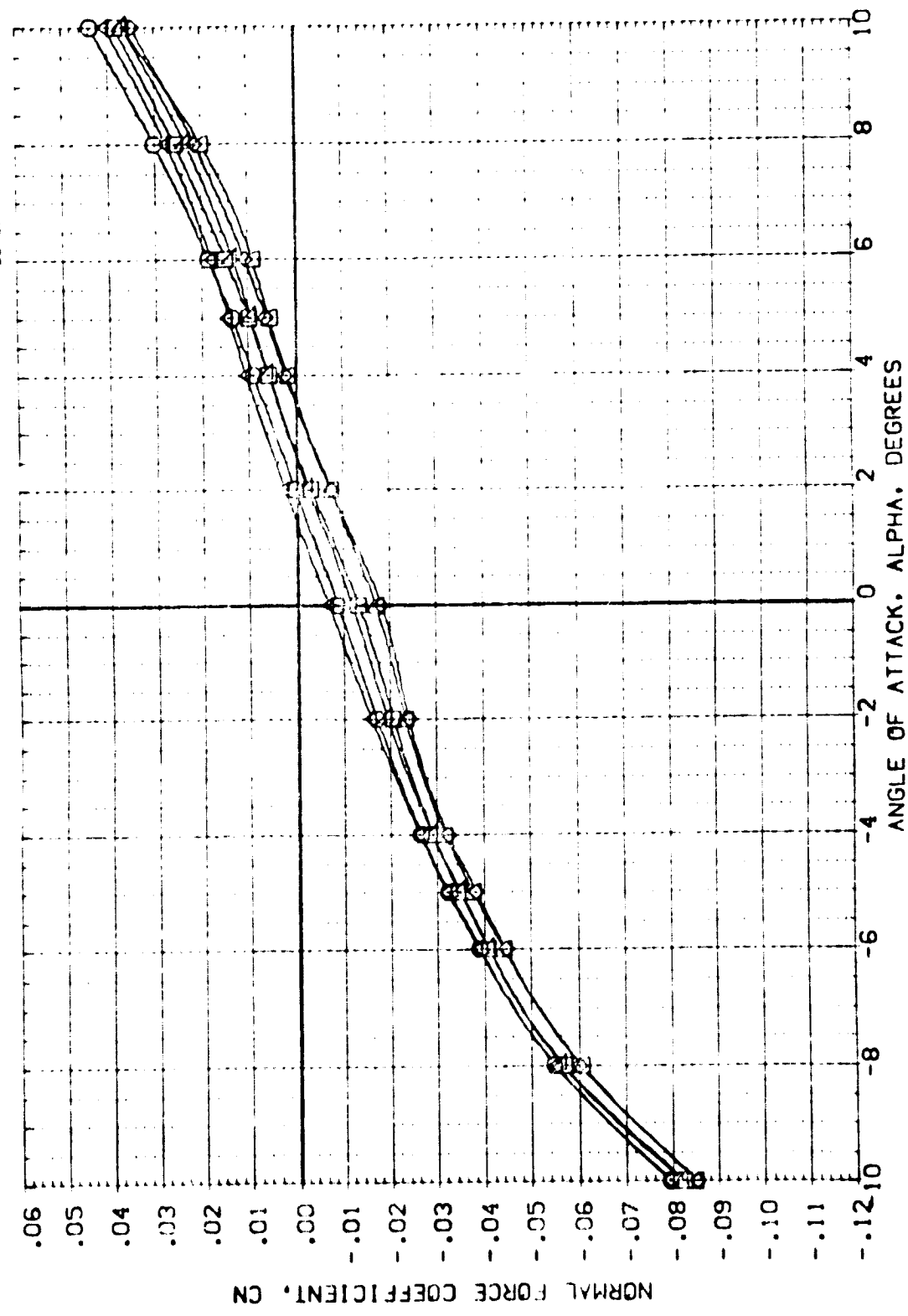


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (031)/(T9)/(S3/2)

(E)MACH = 1.25

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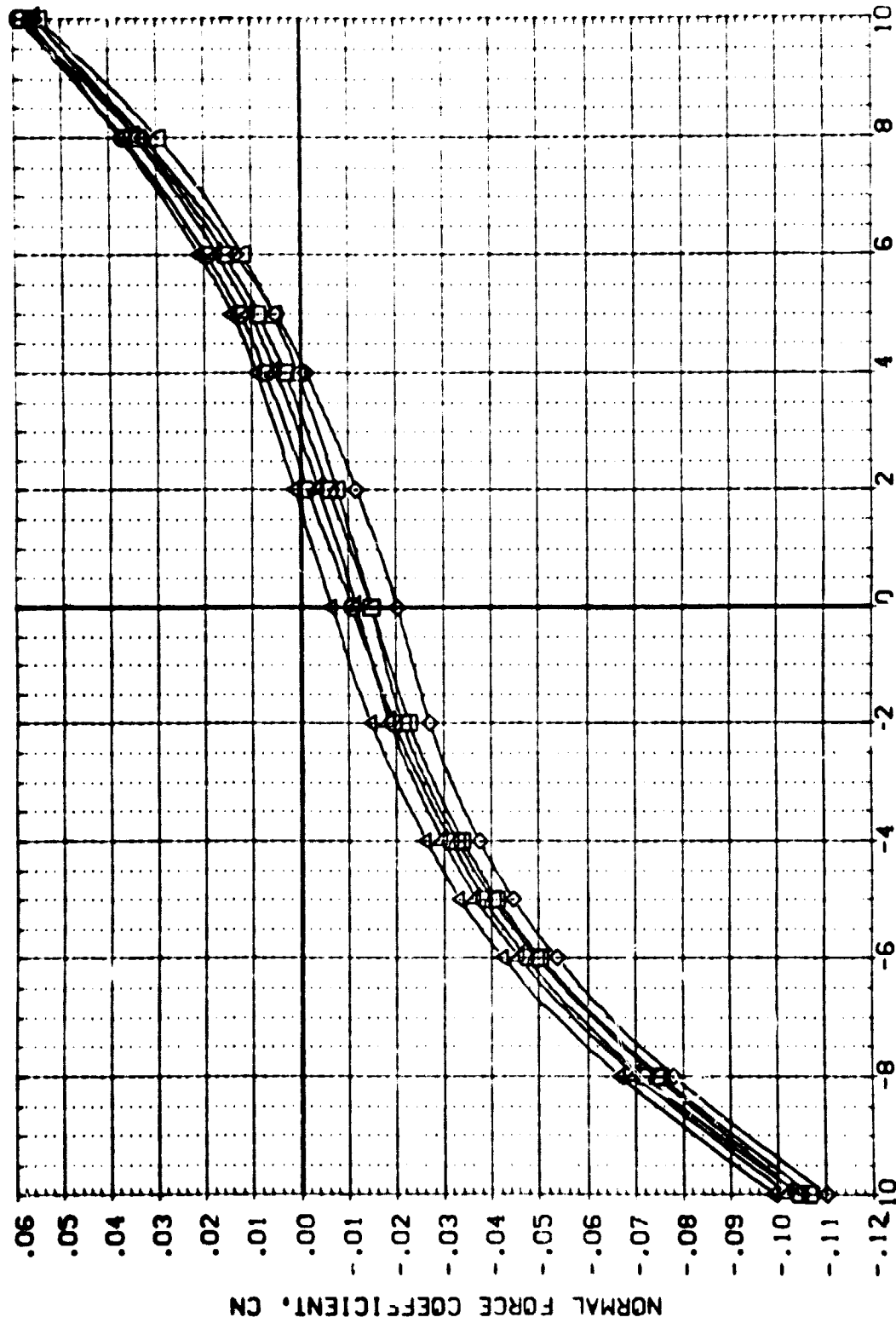
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	LREF .5330
(C83503)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	BREF .5330
(C83504)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	WREF .5480
(C83505)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	WREF .5480
(C83506)	MSFC 570 (IA31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	WREF .5480
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(F)MACH = 1.46

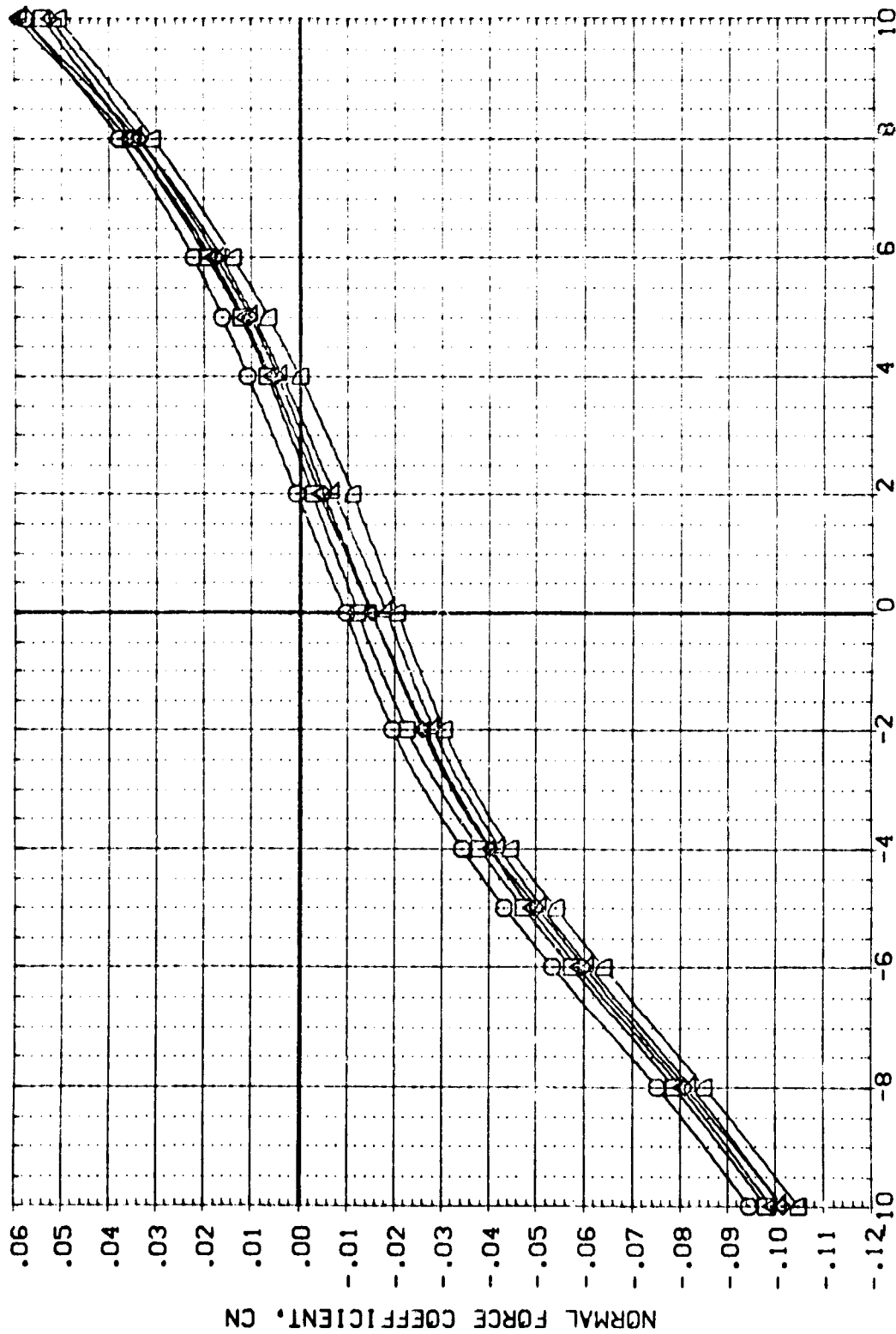
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YREF 2.5490
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YREF 2.5490
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YREF 2.5490
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

(G)MACH = 1.95 PAGE 322

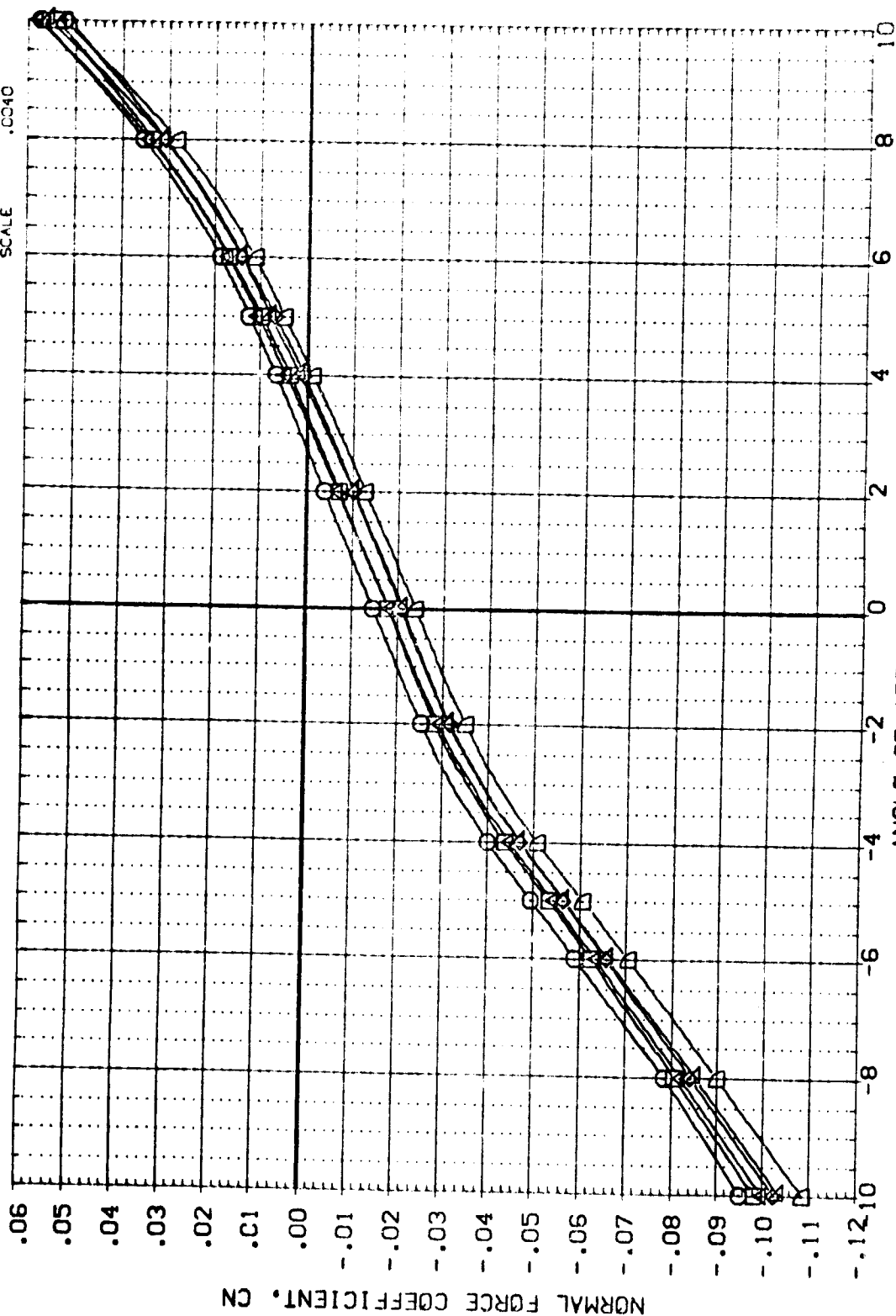
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	SREF .9720 SO .1
(C83502)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83503)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	BREF 2.5450
(C83504)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	XMRP .0000
(C83505)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	YMRP .0000
(C83506)	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(H)MACH = 2.99

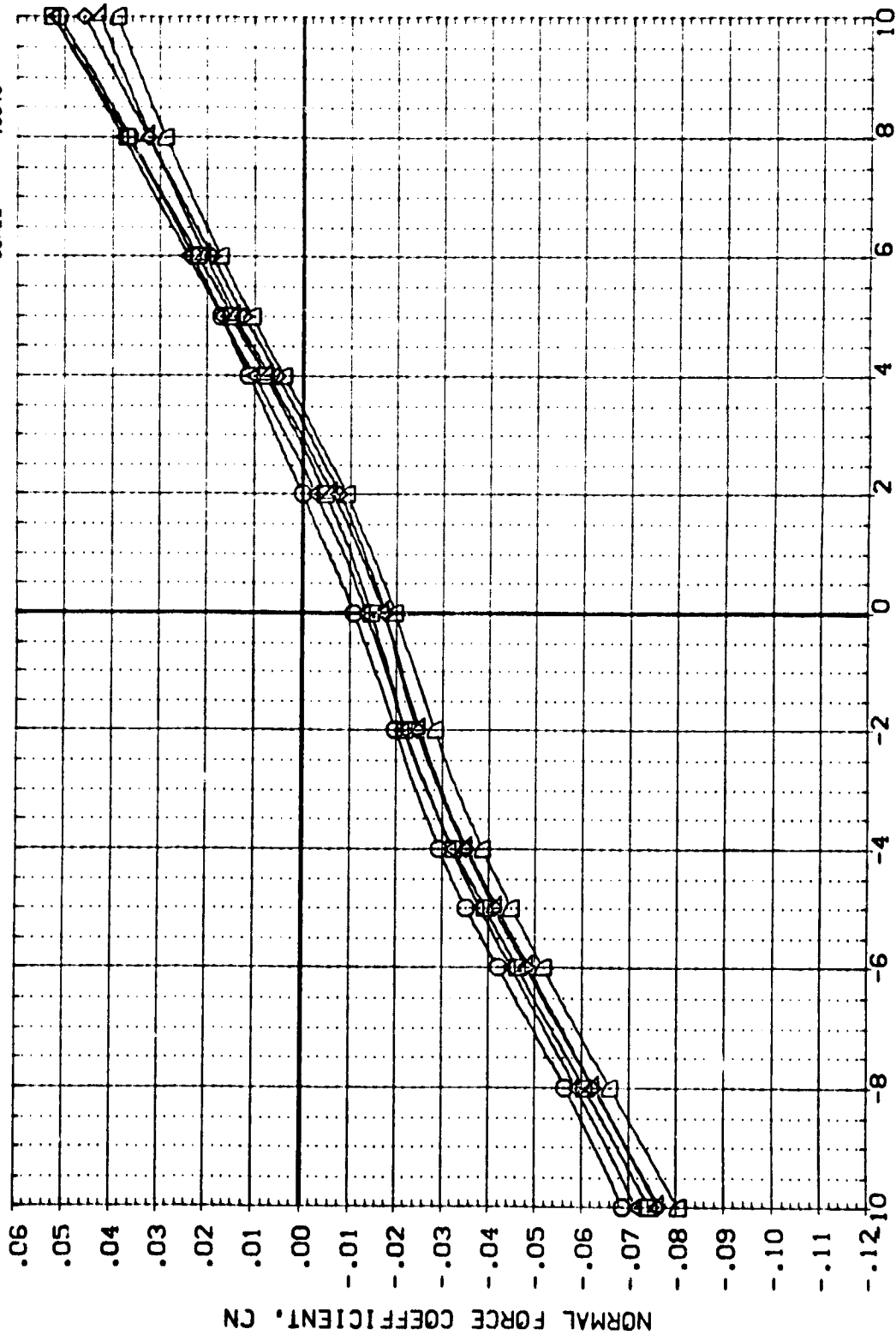
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORB INC	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	SREF .9720
(C83502)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	LREF 5.3130
(C83503)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83504)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.280	YMRP 2.5450
(C83505)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.280	ZMRP .0000
(C83506)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(1)MACH = 3.48

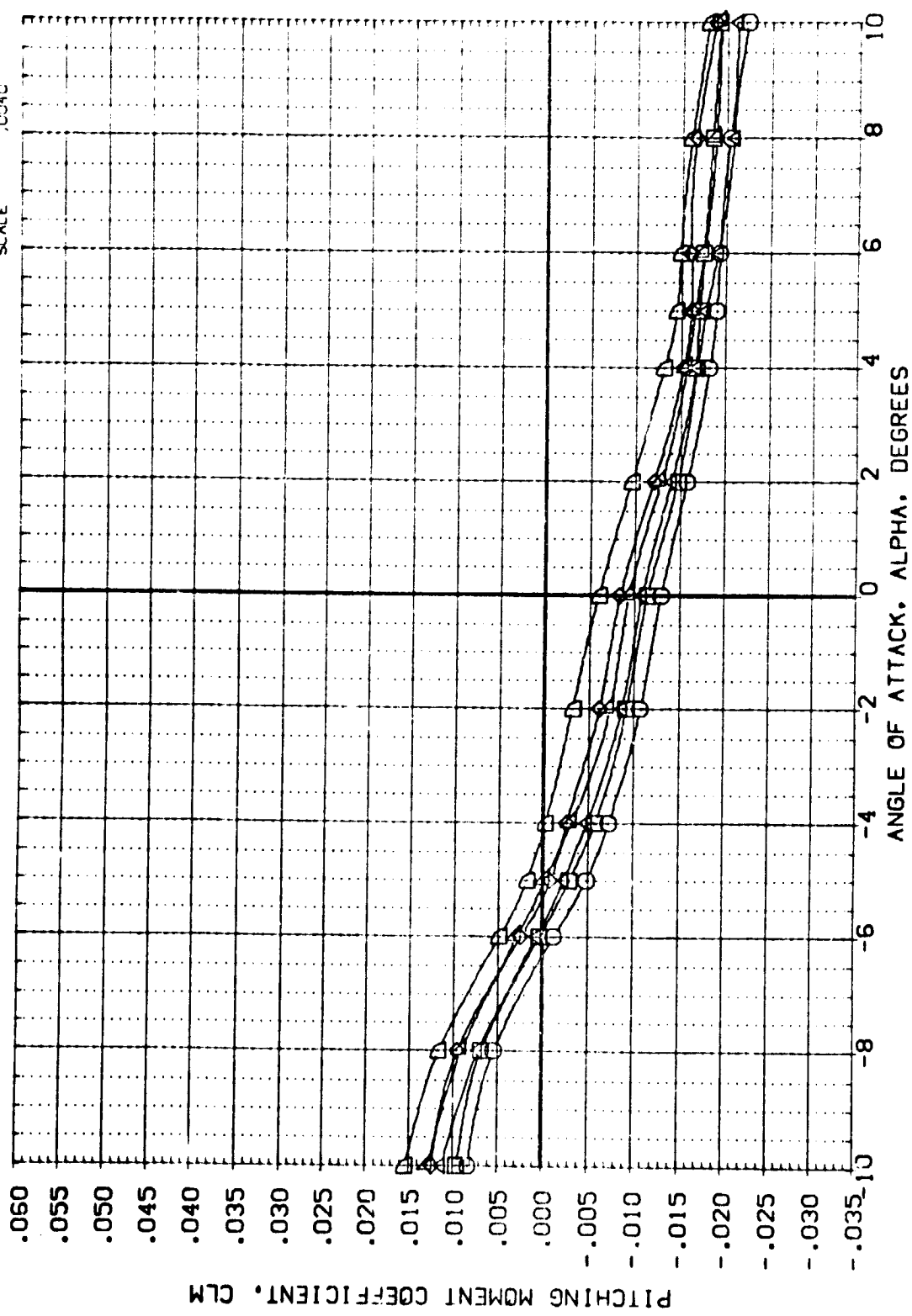
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[C83501]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SRFF .9720 SQ. IN
[C83502]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LR 5.3130 IN.
[C83503]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	BRFF 5.3130 IN.
[C83504]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
[C83505]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
[C83506]	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(J)MACH = 4.96

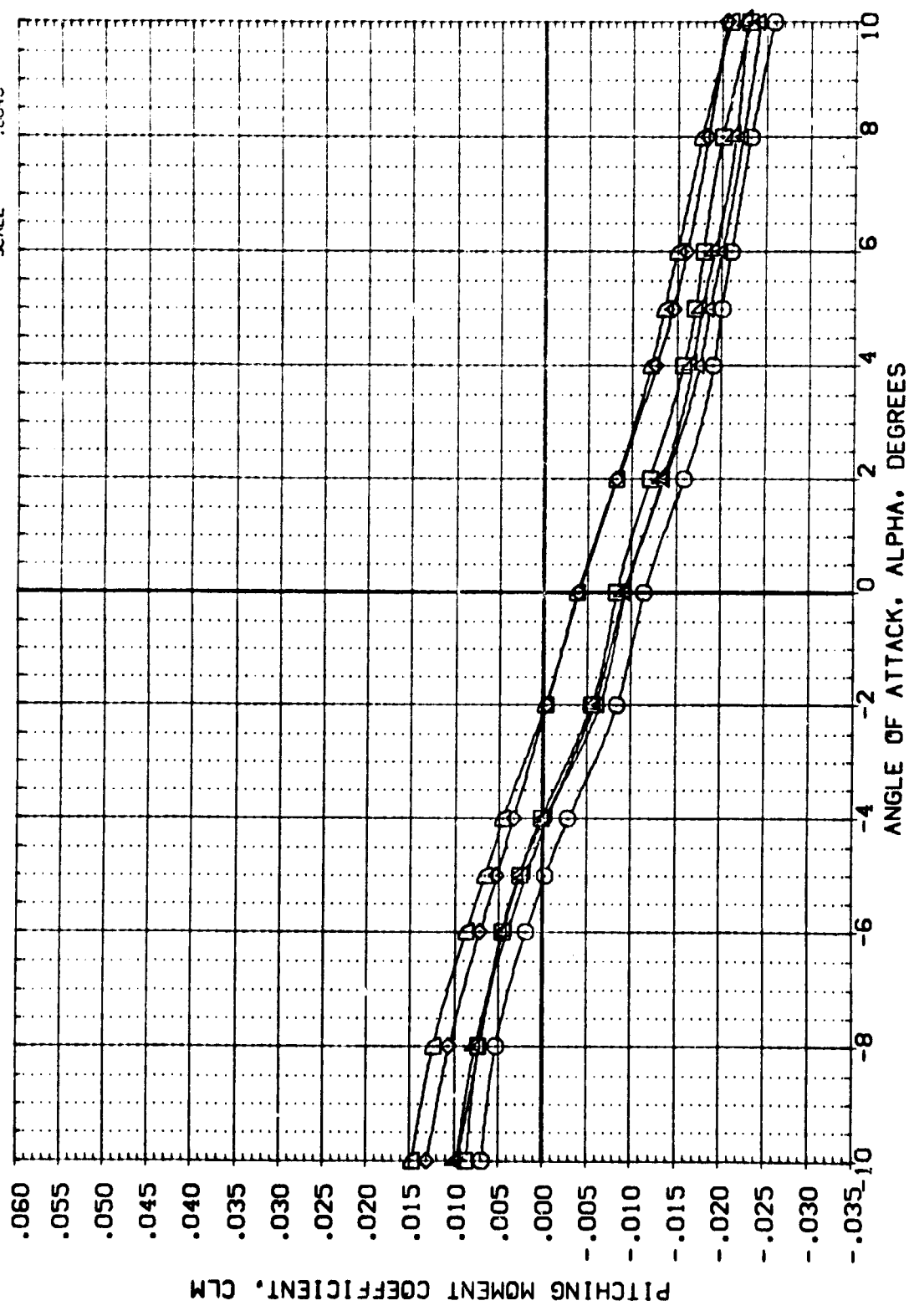
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	SFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	YMRP .0000 IN.
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A)MACH = .60

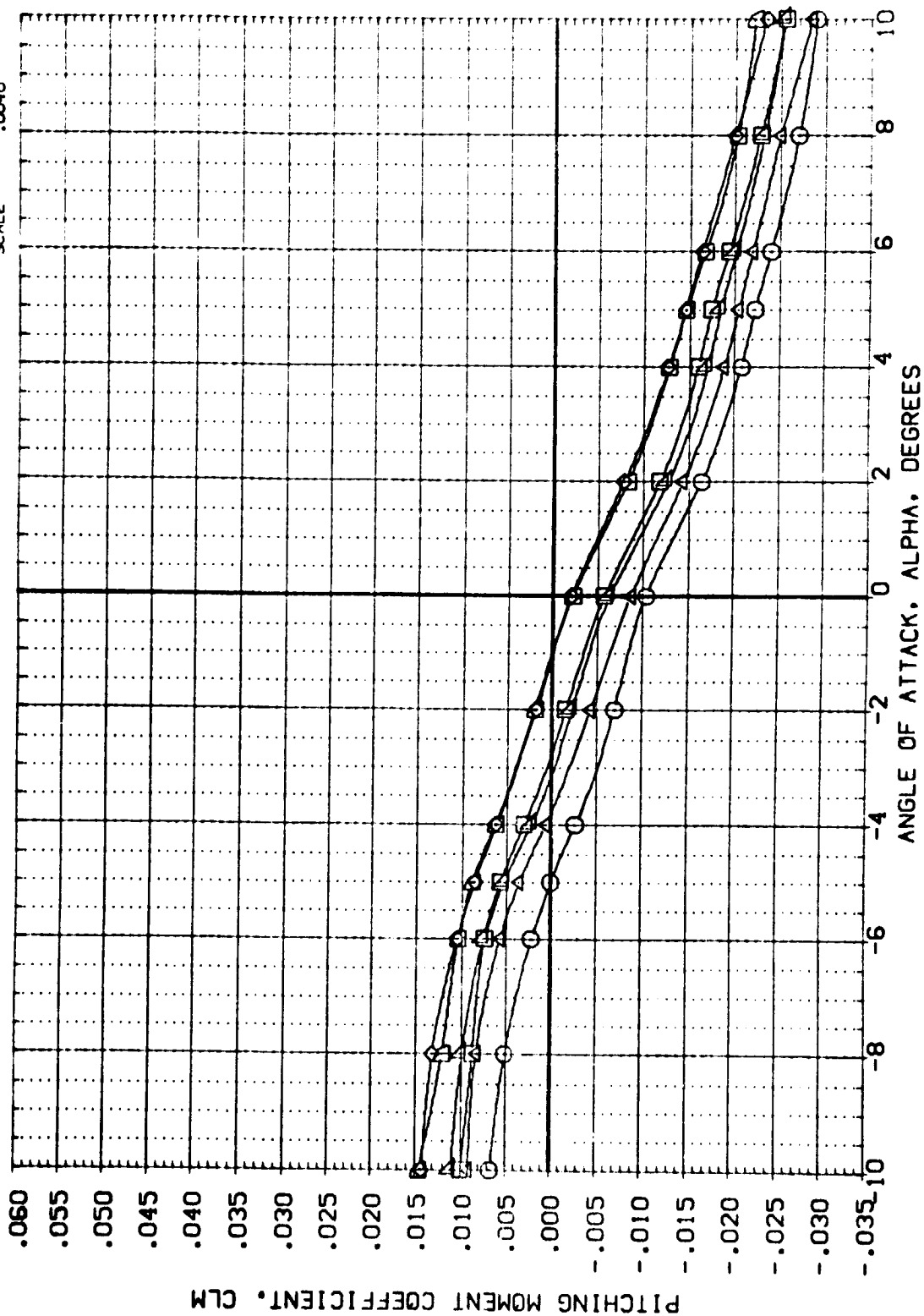
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	.500	.280	ZMRP .0000 IN.
(C83506)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	.000	1.500	.280	SCALE .0040 IN.



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = .80

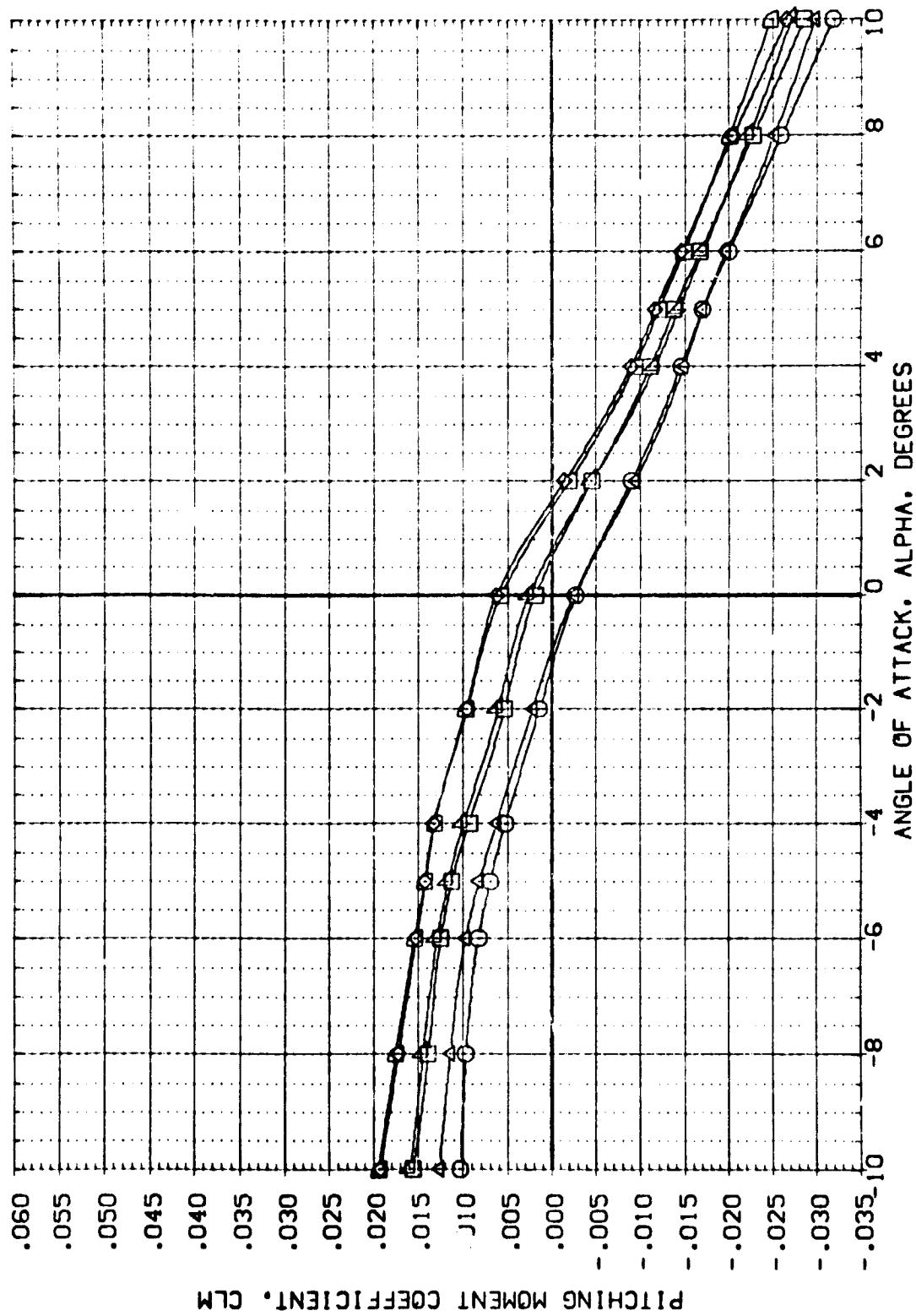
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	SREF .9720 50. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000 IN.
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	SCALE .0040



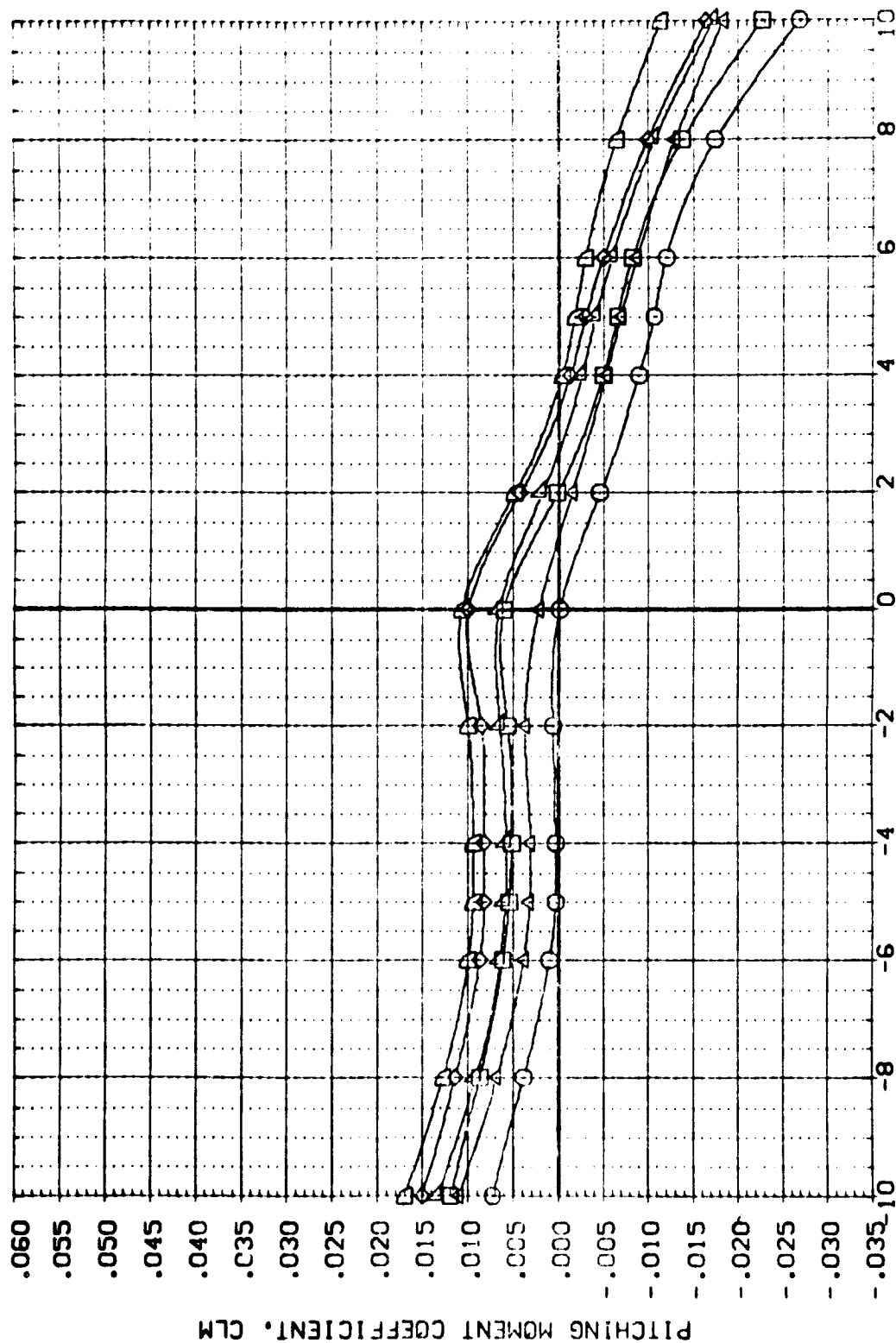
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	ZMRP .0000 IN.
					SCALE .0040



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	1.500	.140	BREF 5.3130 IN
(C83504)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	XMRP 2.5490 IN
(C83505)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	.500	.280	YMRP .0000 IN
(C83506)	MSFC 570((A31F)(S3/2)/(O3)/(T9)/(S3/2))	.000	1.500	.280	ZMRP .0000 IN
				SCALE	.0040

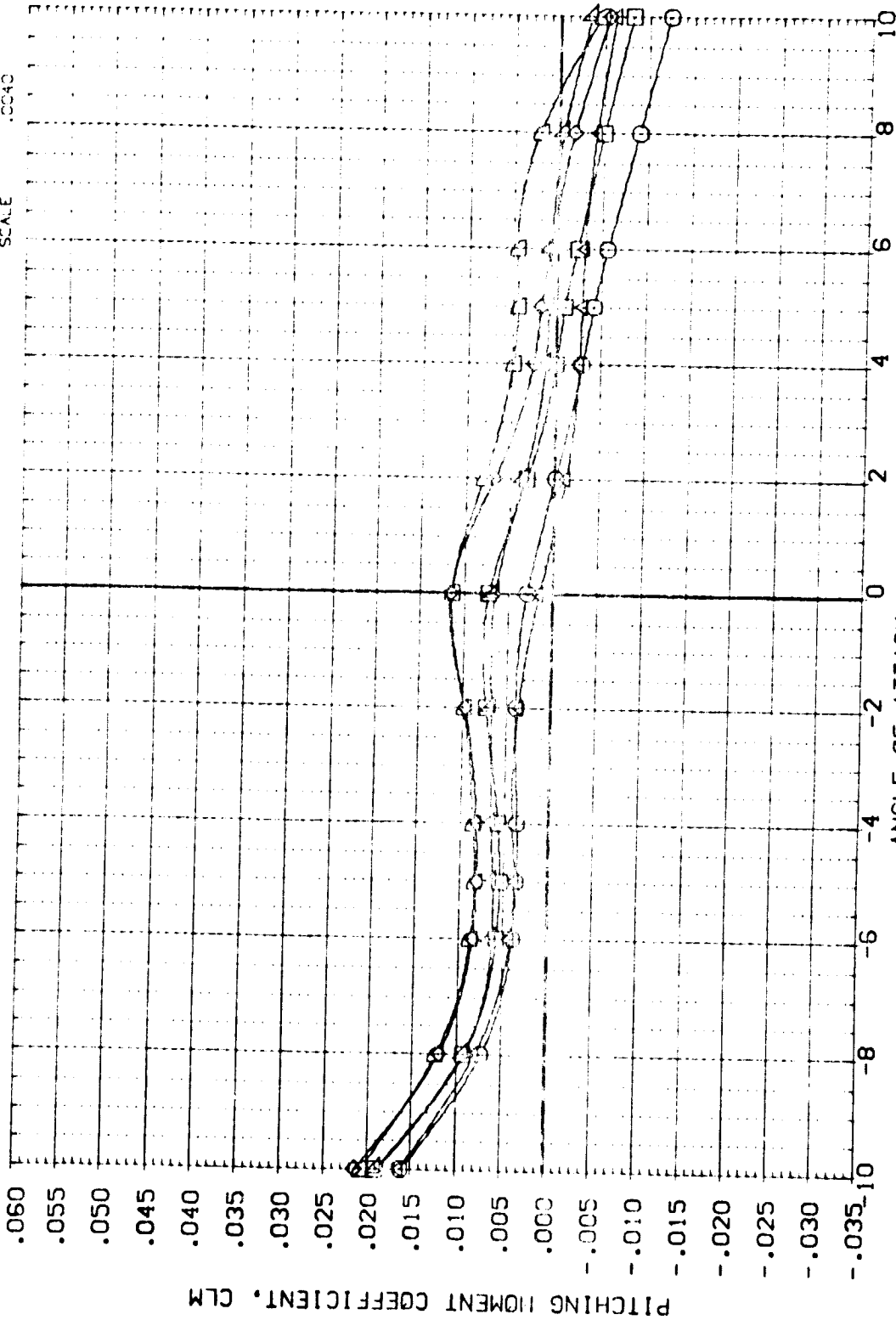


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(E)MACH = 1.25

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORB INC	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	-.500	.140	SREF 9720 SQ. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	-.500	.280	XMRP 2.5480 IN
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YMRP 2.5480 IN
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	1.500	.280	ZMRP 2.5480 IN
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

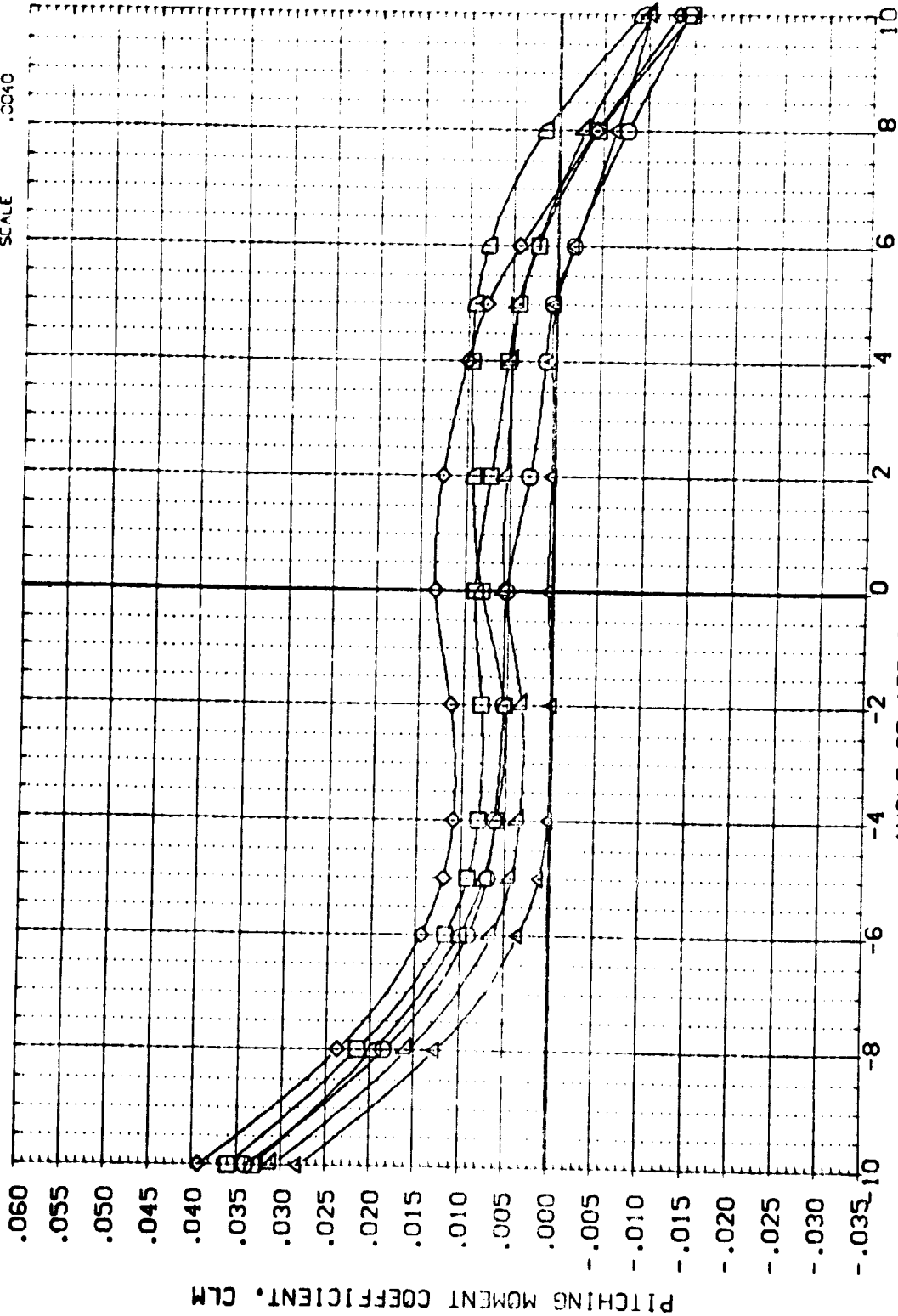
(M)MACH = 1.46

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83501) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (C83502) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (C83503) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (C83504) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (C83505) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (C83506) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

BETA ORBITAL DELTA Z
 .000 .500 .140
 .000 .500 .140
 .000 .500 .140
 .000 .500 .280
 .000 .500 .280
 .000 .500 .280

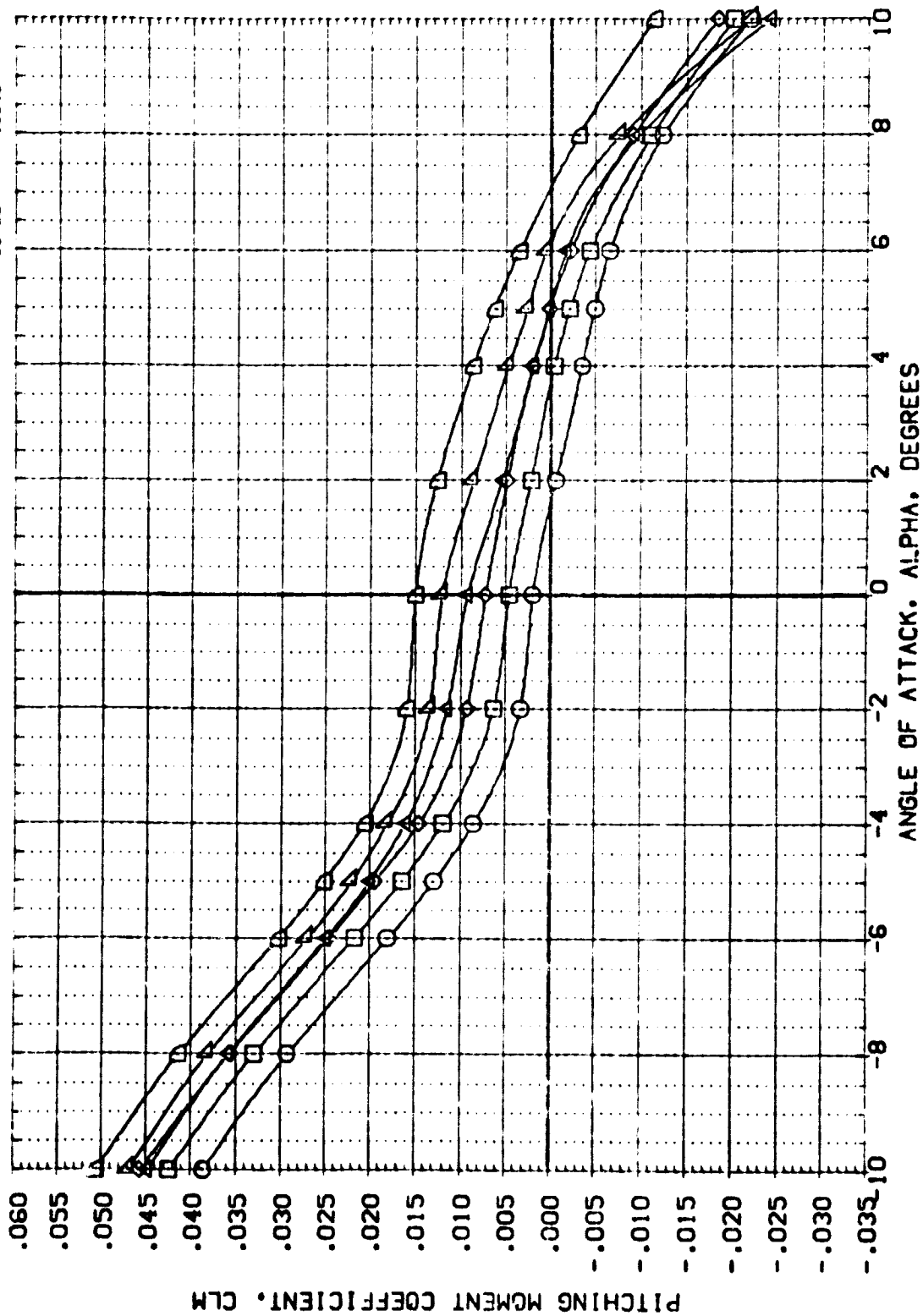
REFERENCE INFORMATION
 SREF 9720 SC IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(G)MACH = 1.96

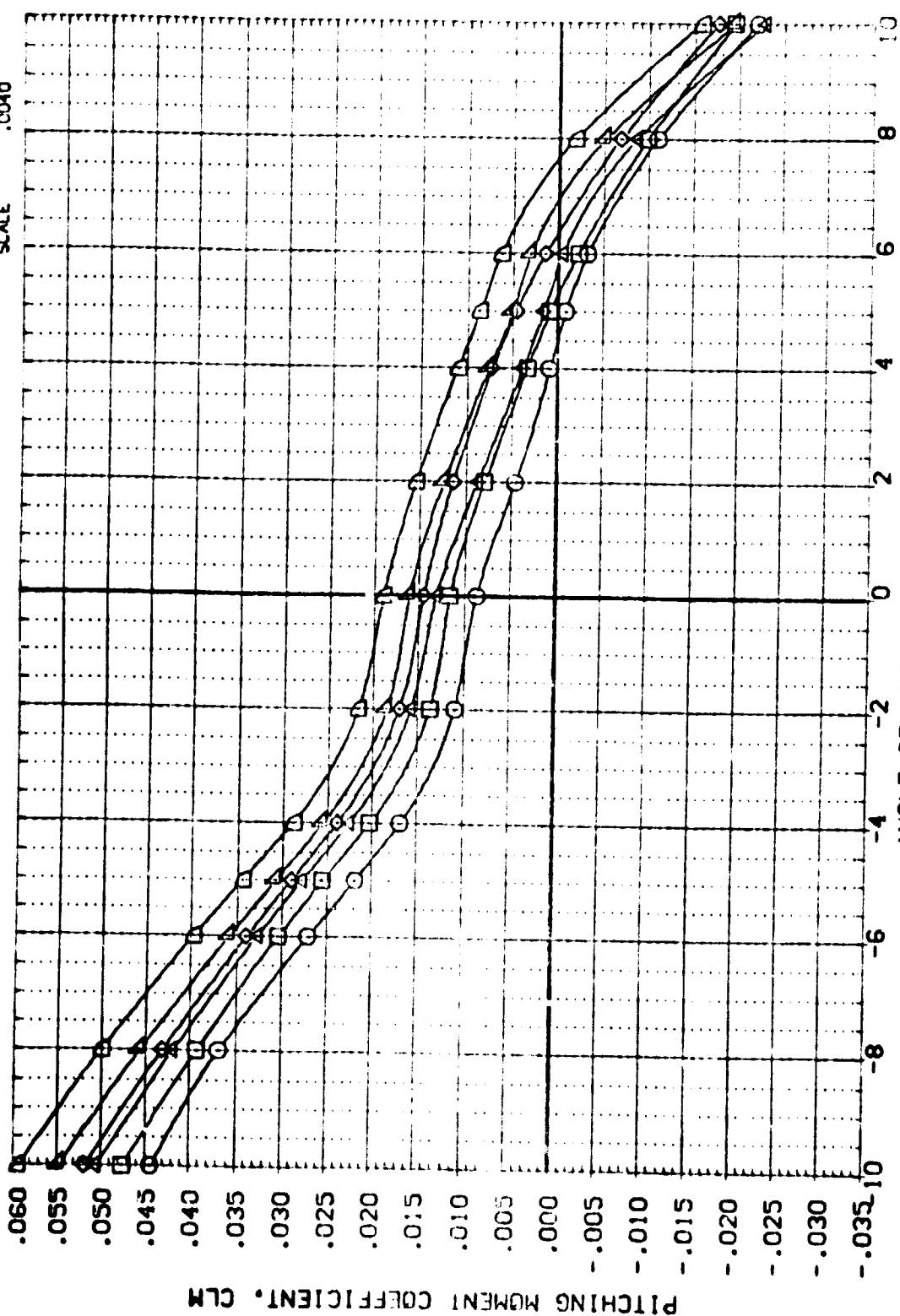
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.140	LREF 5.313C IN
(C83503)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.140	BREF 5.313C IN
(C83504)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.280	YMSP 2.549C IN
(C83505)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.280	ZMRP .0000 IN
(C83506)	MSFC 5701 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

(H)MACH = 2.99

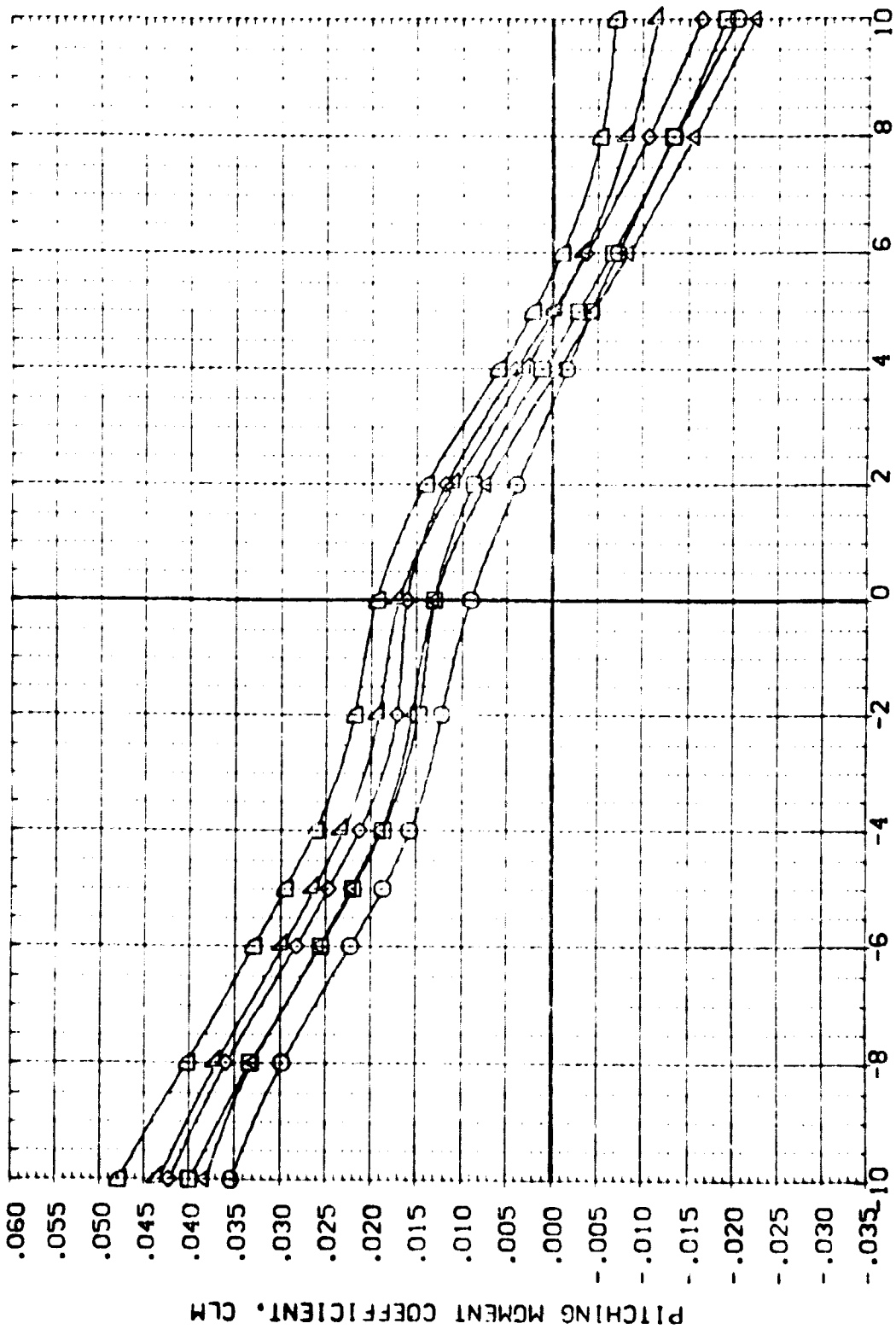
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	SRF .9720 SQ. IN
(C83502)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	LRF 5.3130 IN.
(C83503)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	DRF 5.3130 IN.
(C83504)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.260	XMRP 2.5450 IN.
(C83505)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.260	YMRP .0000 IN.
(C83506)	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.260	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(1)MACH = 3.48

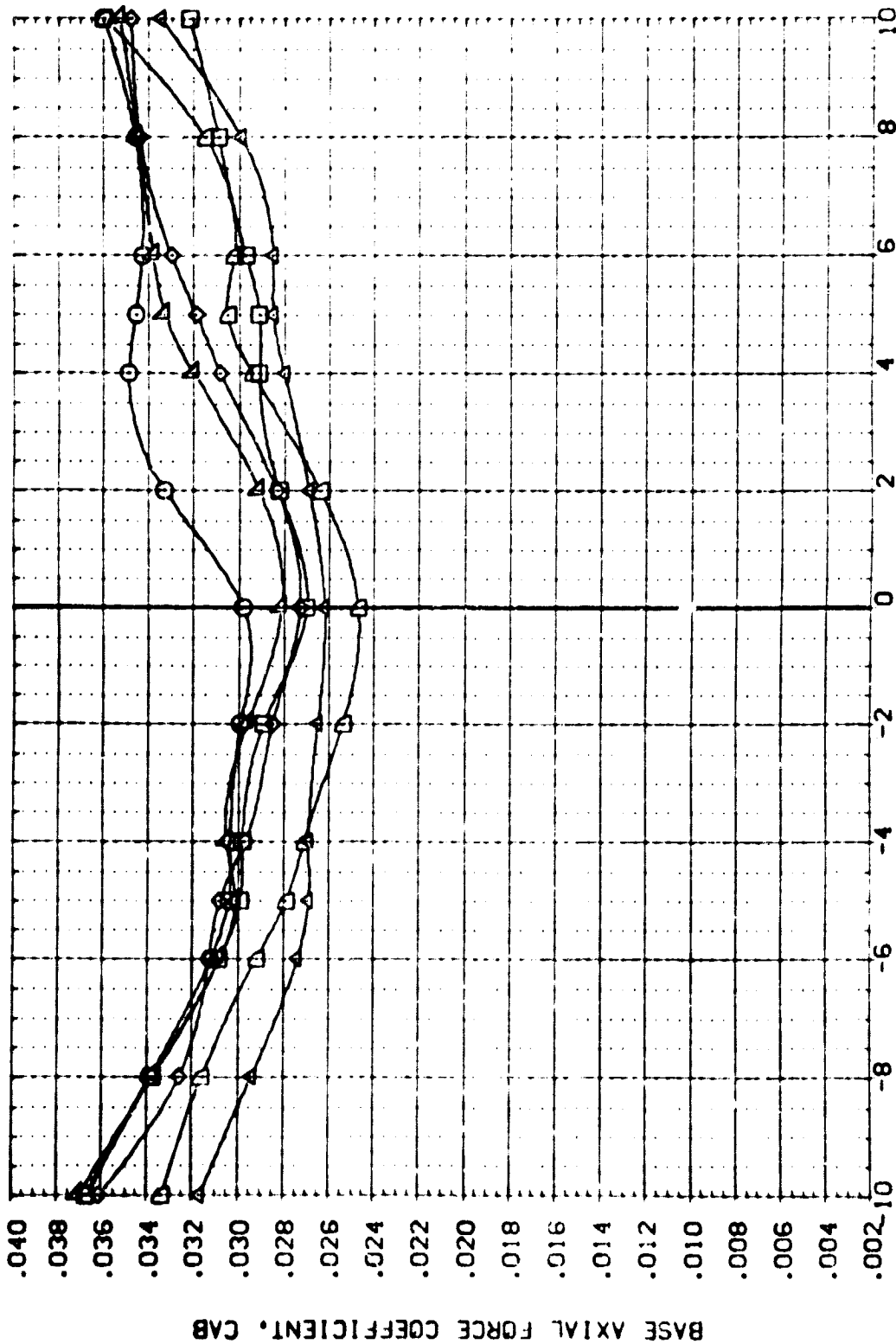
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
CB3501	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
CB3502	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130
CB3503	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.140	BREF 2.5480
CB3504	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.280	YREF .0000
CB3505	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.280	ZREF .0000
CB3506	MSFC 570(A31F)(S3/2)/(T9)/(S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (T9)/(S3/2)

() MACH = 4.96

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(CB3501)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.140	SREF .5720 SO. IN
(CB3502)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.140	LREF 5.3130
(CB3503)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.140	BREF 2.5450
(CB3504)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.260	XMAP .0000
(CB3505)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.260	YMAP .0000
(CB3506)	MSFC 570((A31F))((S3/2))((03))((T9))((S3/2))	.000	.500	.260	ZMAP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORB INC DELTA Z REFERENCE INFORMATION

(C83501) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .140 SREF 9720 50. IN

(C83502) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .140 LBREF 5.3130 .

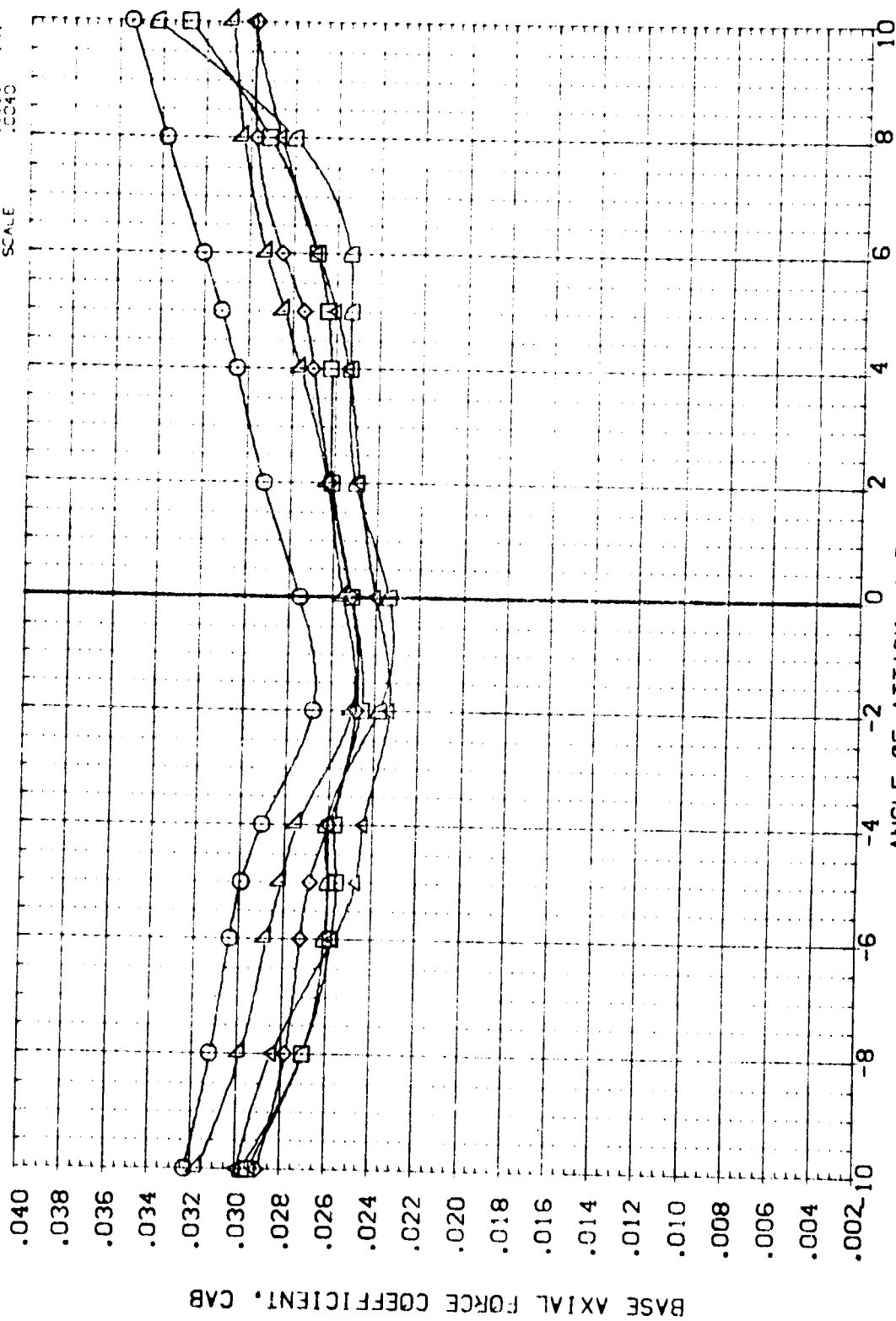
(C83503) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .140 BRREF 2.5490 .

(C83504) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .280 XMRP .0000 .

(C83505) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .280 YMRP .0000 .

(C83506) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)) .000 -.500 .280 ZMRP .0000 .

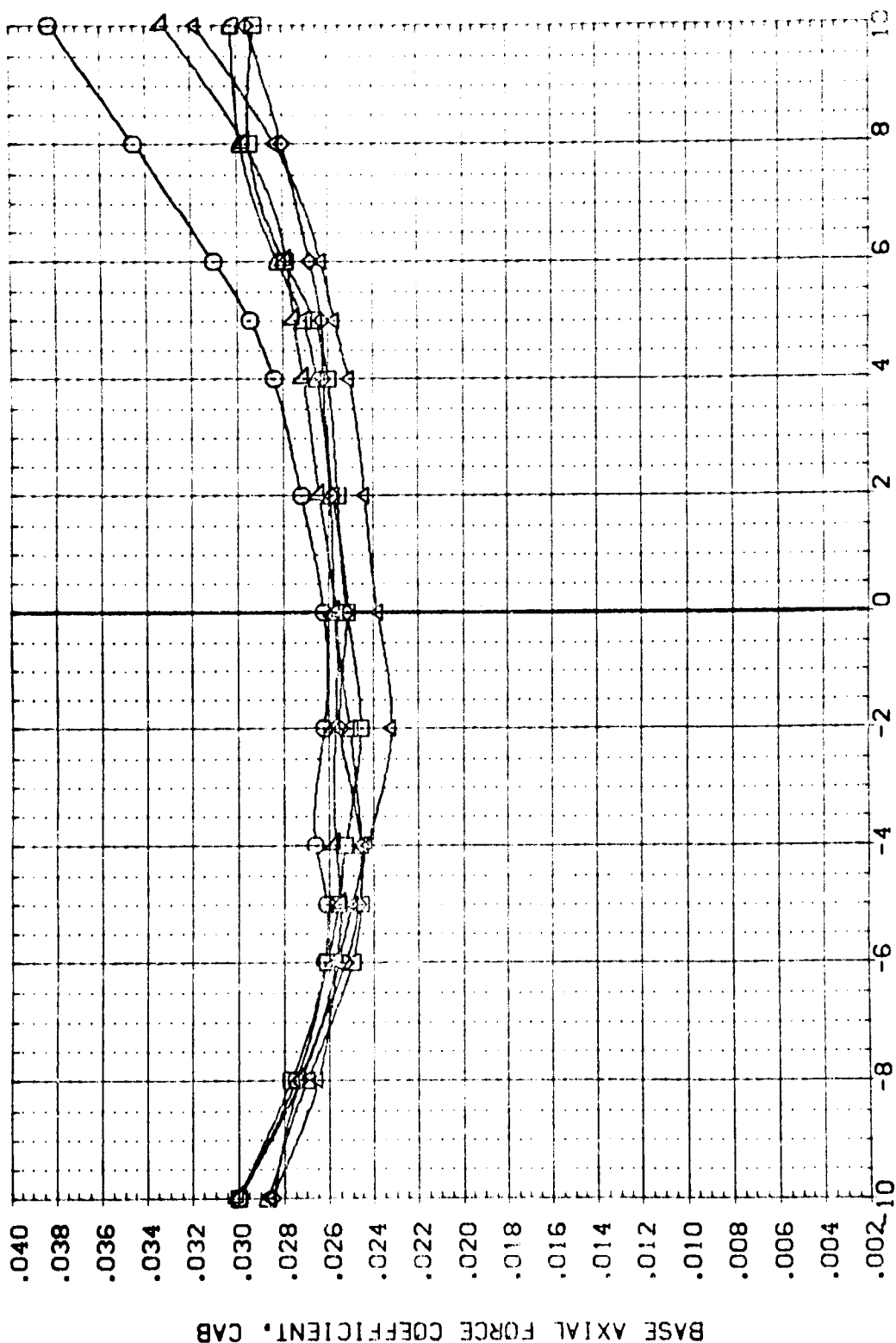
SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = .80

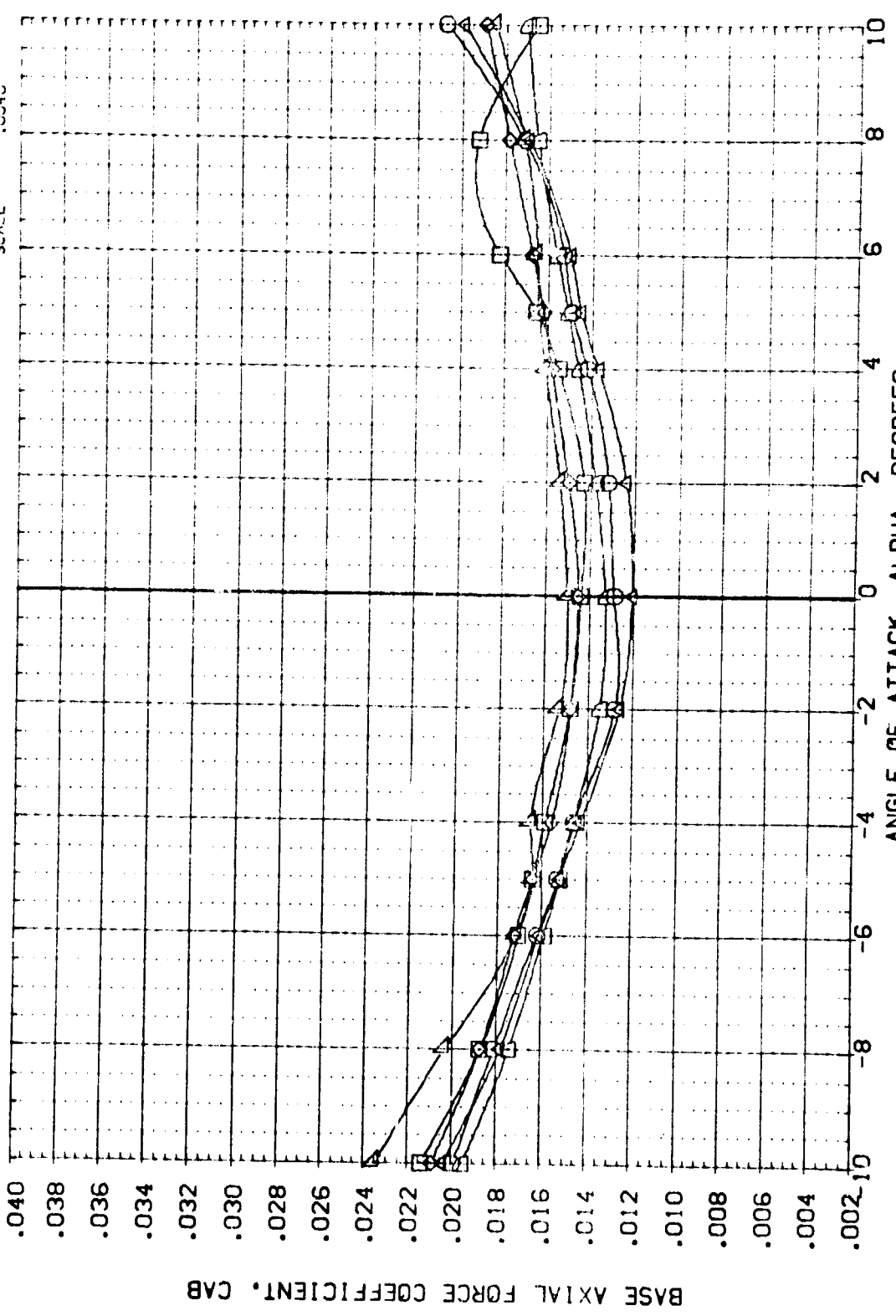
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	SREF 9/20 SQ. IN
(C83502)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	-.500	.280	XMRP 2.5480 IN.
(C83505)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = .90

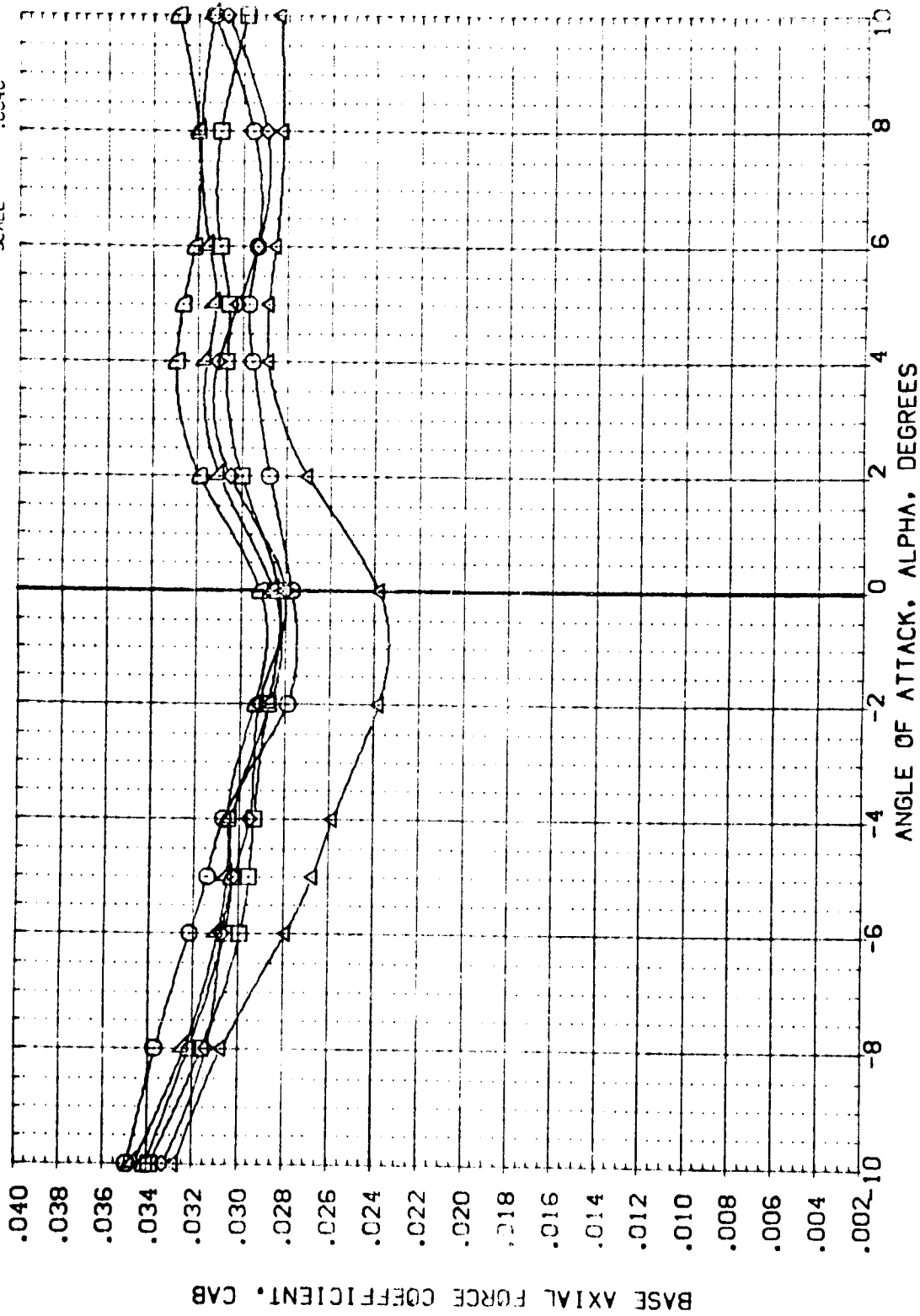
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	SREF .9720 SQ. IN
(C83502)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	LREF 5.3130
(C83503)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	BREF 5.3130
(C83504)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	XMRP 2.5490
(C83505)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	YMRP .0000
(C83506)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.40	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(0)MACH = 1.05

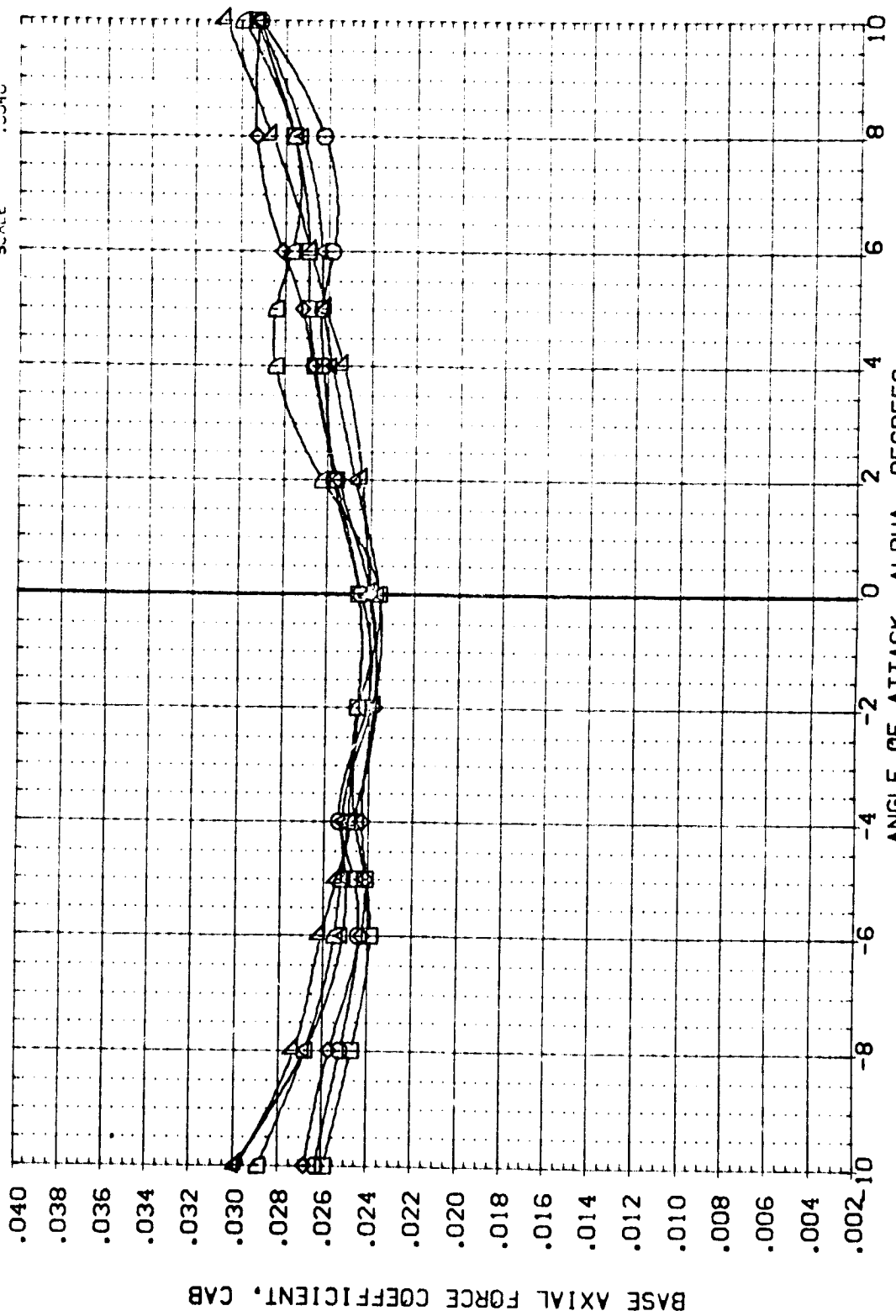
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83503)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83504)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5450
(C83505)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000
(C83506)	MSFC 570(A31F)(S3/2)/(C3)/(T9)/(S3/2)	.000	.500	.280	ZMRP .0000
				SCALE	.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(E)MACH = 1.25

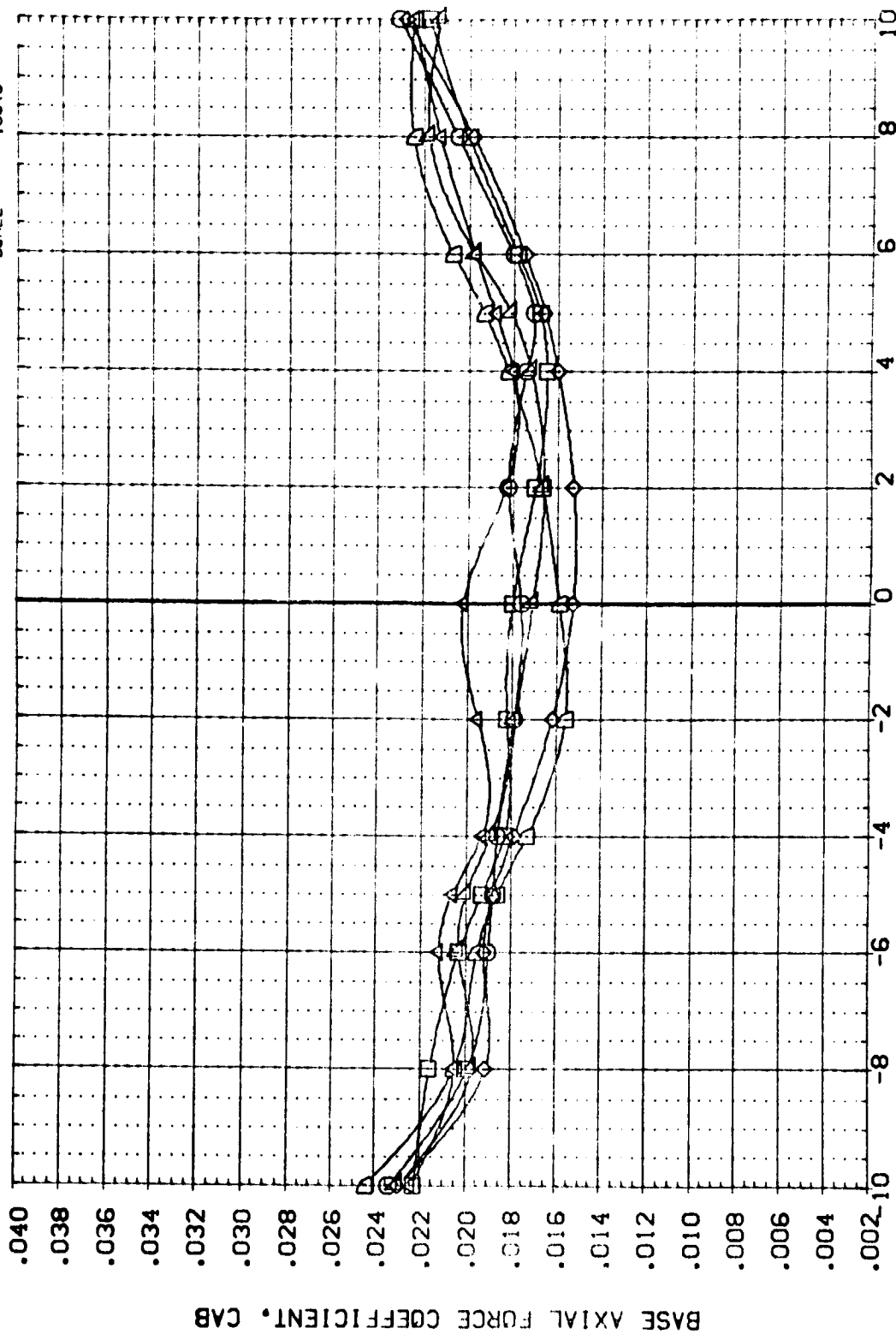
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83503)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83504)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83505)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000
(C83506)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(F)MACH = 1.46

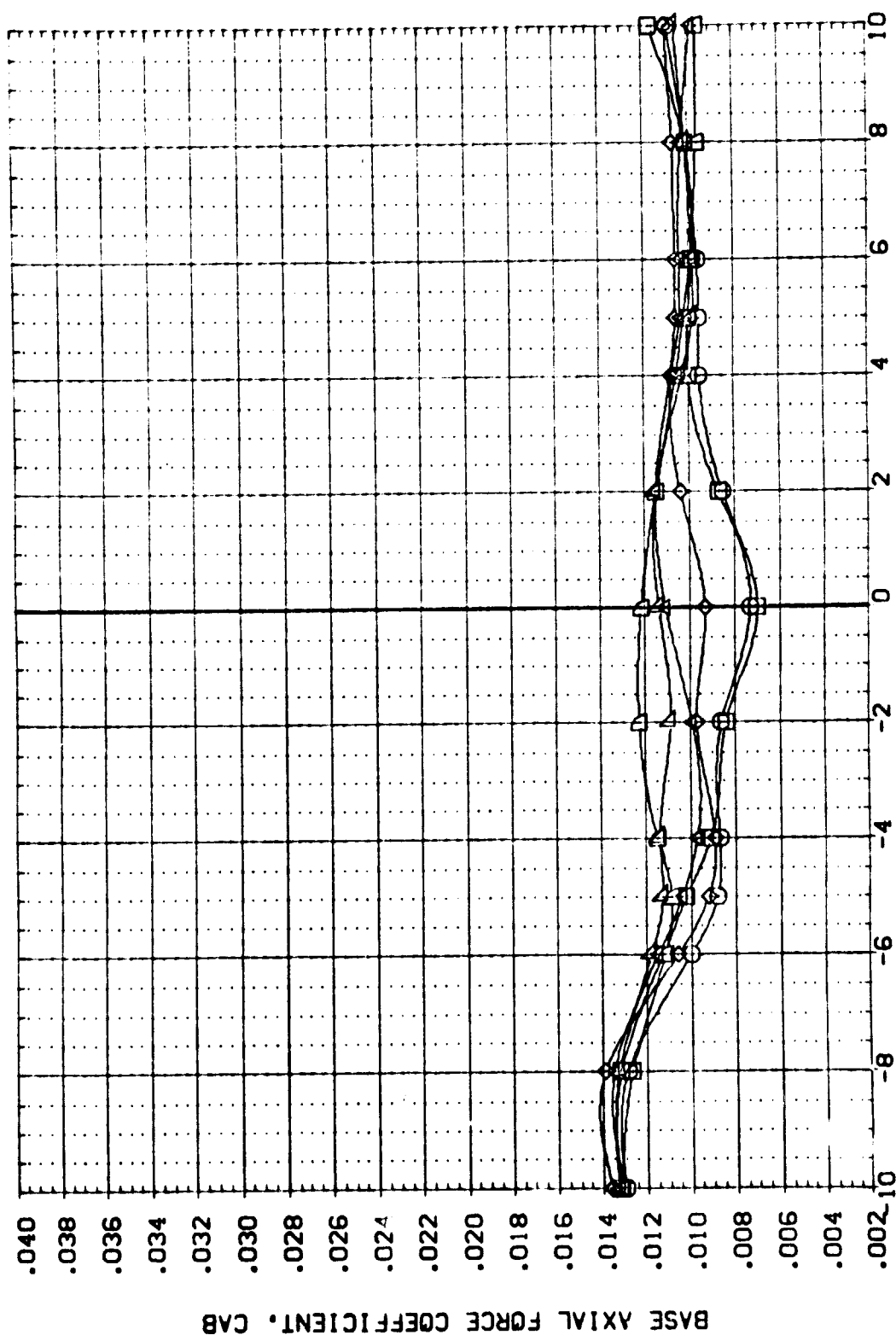
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(CB3S01)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	SREF .9720 SO IN
(CB3S02)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(CB3S03)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(CB3S04)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	XMRP 2.545C IN
(CB3S05)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YMRP .0000 IN
(CB3S06)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	ZMRP .0000 IN
				SCALE	.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

(G)MACH = 1.96

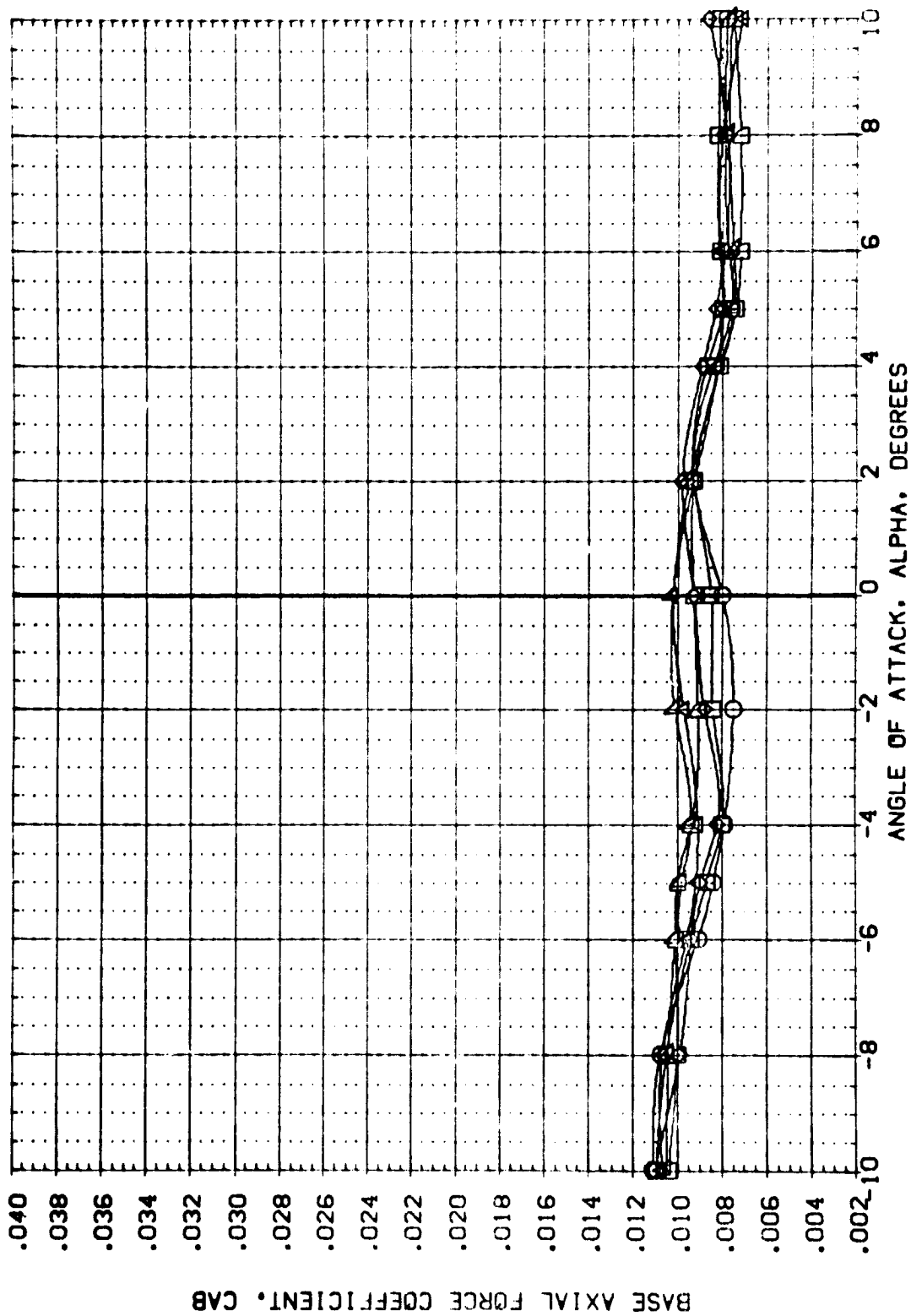
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.140	SREF 9720 IN
(C83502)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83504)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.280	YMRP 2.5490 IN
(C83505)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.280	ZMRP .0000 IN
(C83506)	MSFC 570 (A31F) (S3/2) (03/2) (T9) (S3/2)	.000	.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(H)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	XMRP 2.5490 IN.
(C83505)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83506)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040

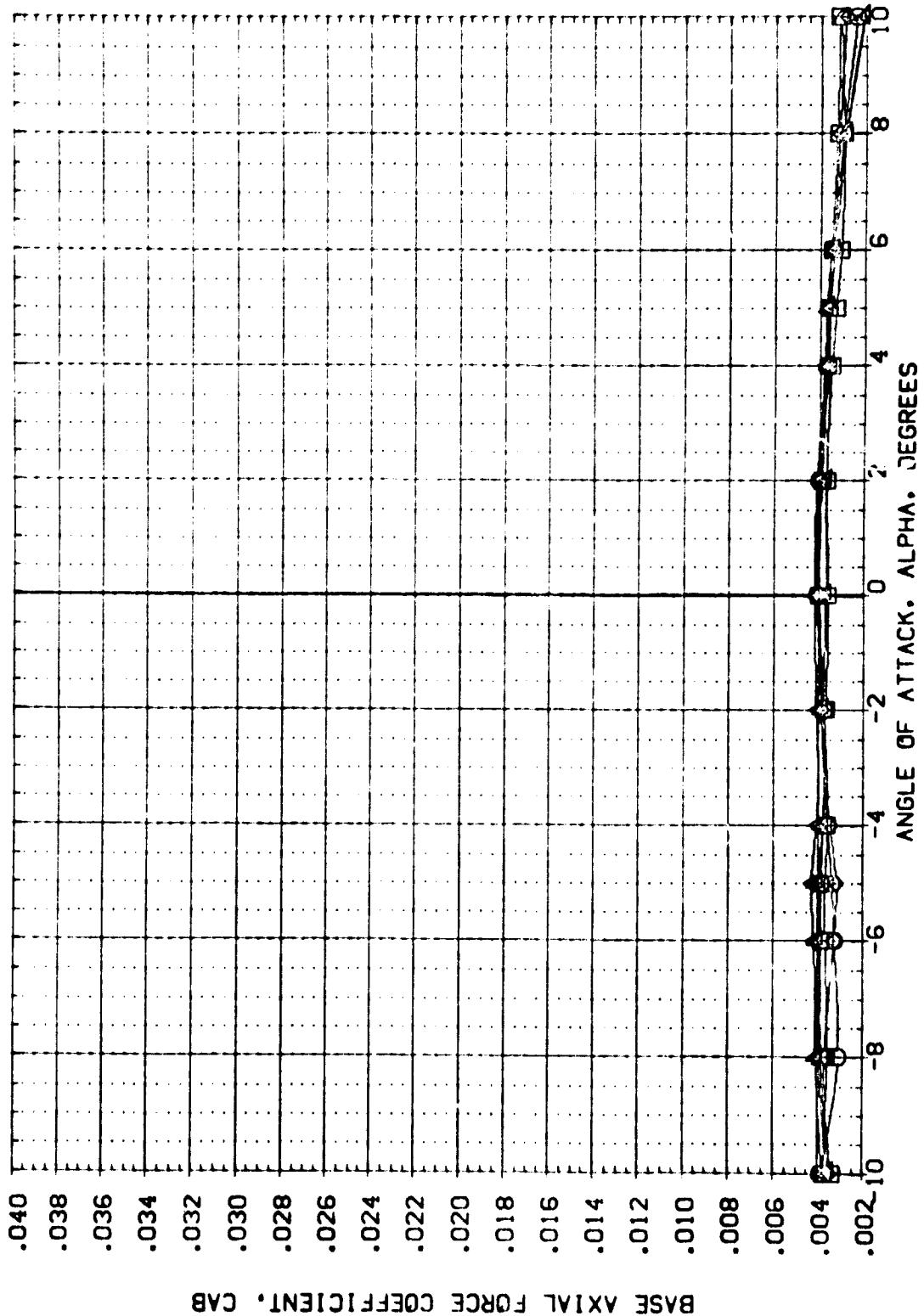


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(1)MACH = 3.48

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83504)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	XMRP 2.5490 IN
(C83505)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	YMRP .0000 IN
(C83506)	MSFC 570 (A31F) (S3/2) (03) (T9) (S3/2)	.000	.500	.280	ZMRP .0000 IN
					SCALE .0010

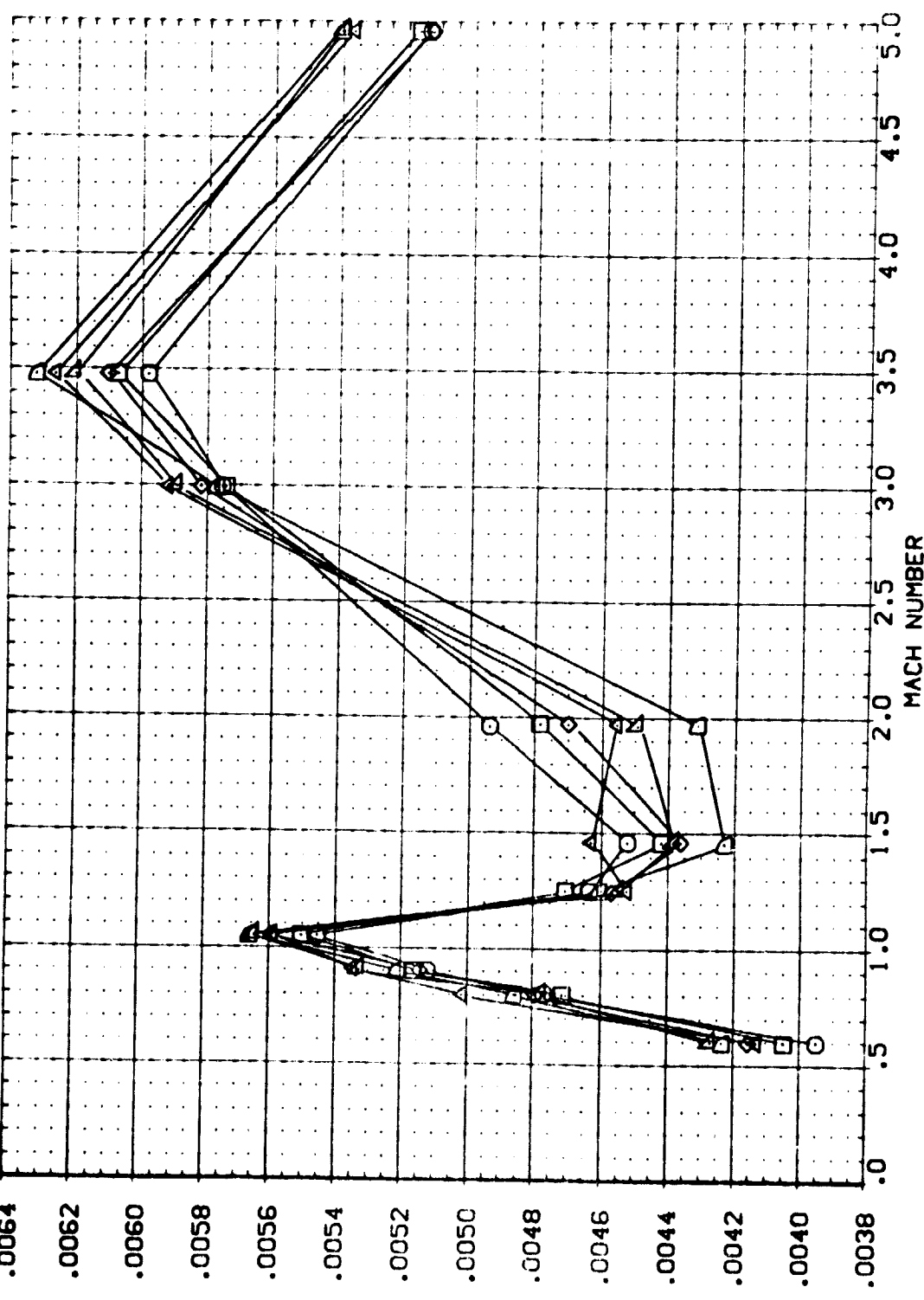


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(J)MACH = 4.96

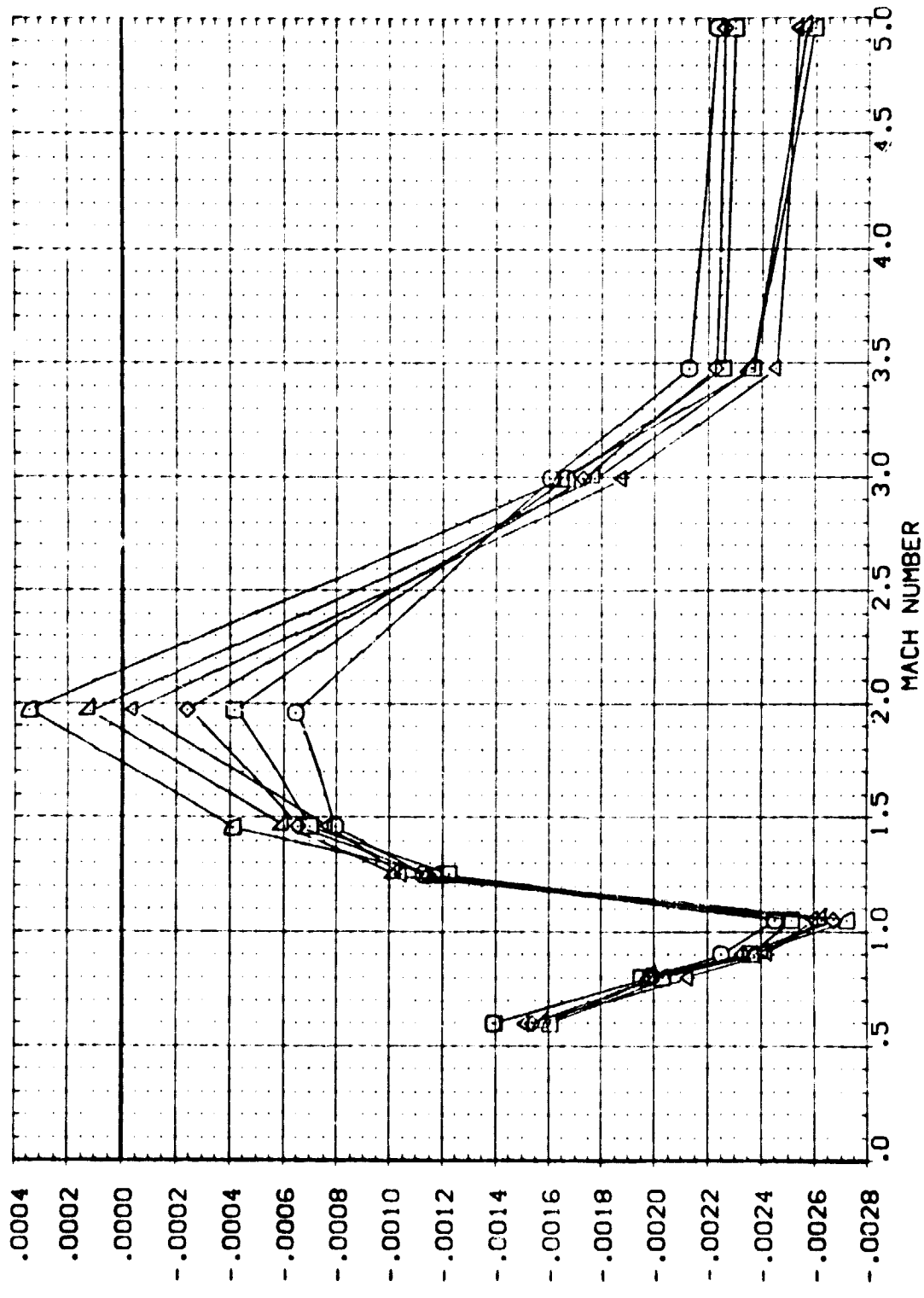
DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBITAL DELTA Z REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.140	BREF 5.3130 IN
(C83504)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	XREF 2.5480 IN
(C83505)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	YREF .0000
(C83506)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	.000	.500	.280	ZREF .0000
					SCALE .0040



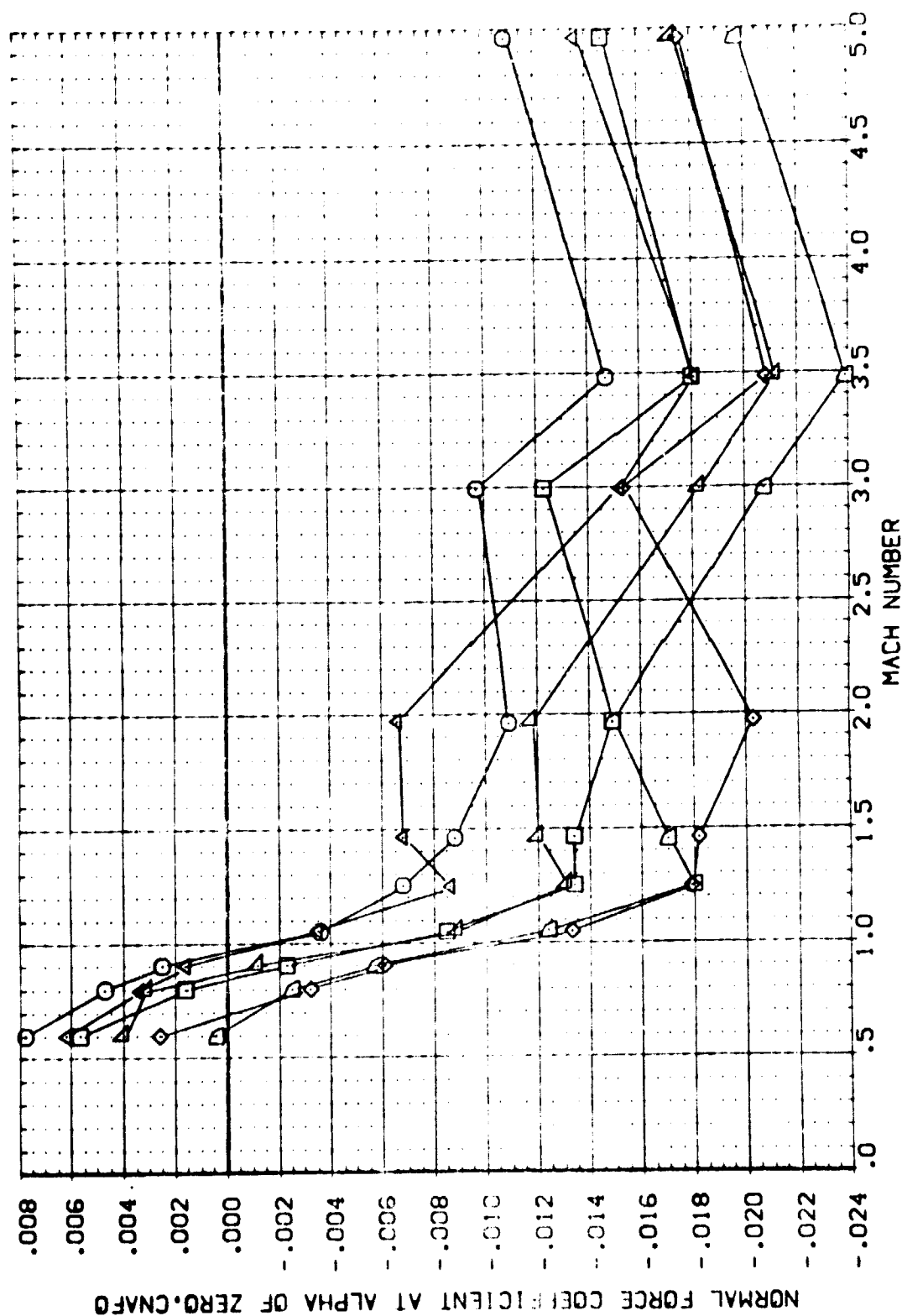
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	-.500	.140	SREF .9720 SQ. IN
(C83502)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
(C83503)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83504)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	-.500	.280	XM2P 2.5490 IN.
(C83505)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.280	YM2P .0000 IN.
(C83506)	MSFC 570(I A3IF)(S3/2)/(O3)/(T9)/(S3/2)	.000	1.500	.280	ZM2P .0000 IN.
					SCALE .0040



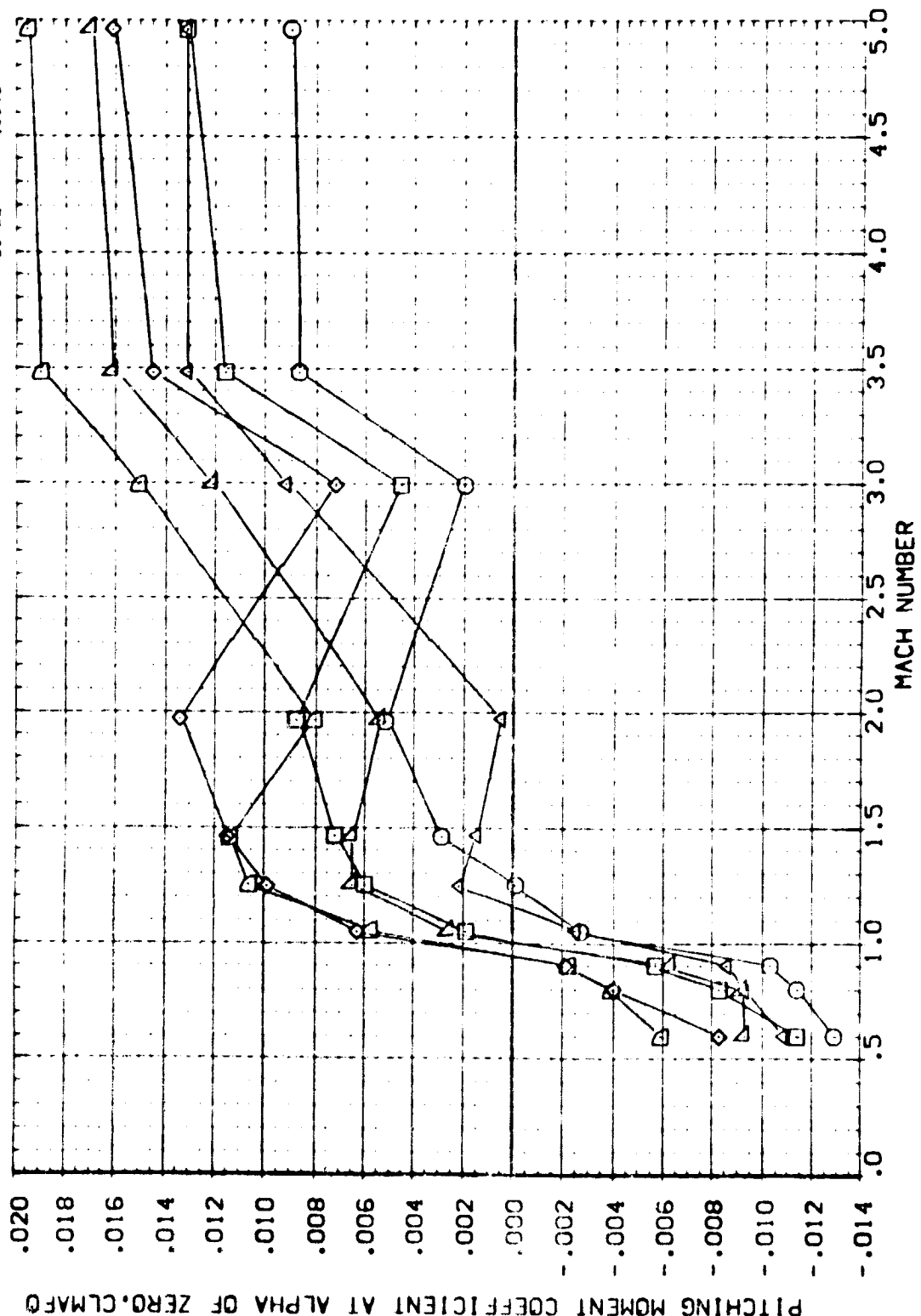
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	-.500	.140	SREF 9720 SO. IN
(C83502)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	.500	.140	LREF 5.3130 IN
(C83503)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	1.500	.140	BREF 5.3130 IN
(C83504)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	-.500	.280	YREF 2.5490 IN
(C83505)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	1.500	.280	YREF 2.5490 IN
(C83506)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	.000	1.500	.280	YREF 2.5490 IN



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.140	SREF .9720 SO. IN
(C83502)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.140	LREF 5.3130
(C83503)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.140	BREF 5.3130
(C83504)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.280	AMP 2.5490
(C83505)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.280	YMRP .0000
(C83506)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	.000	-1.500	.280	ZMRP .0000
					SCALE .0040

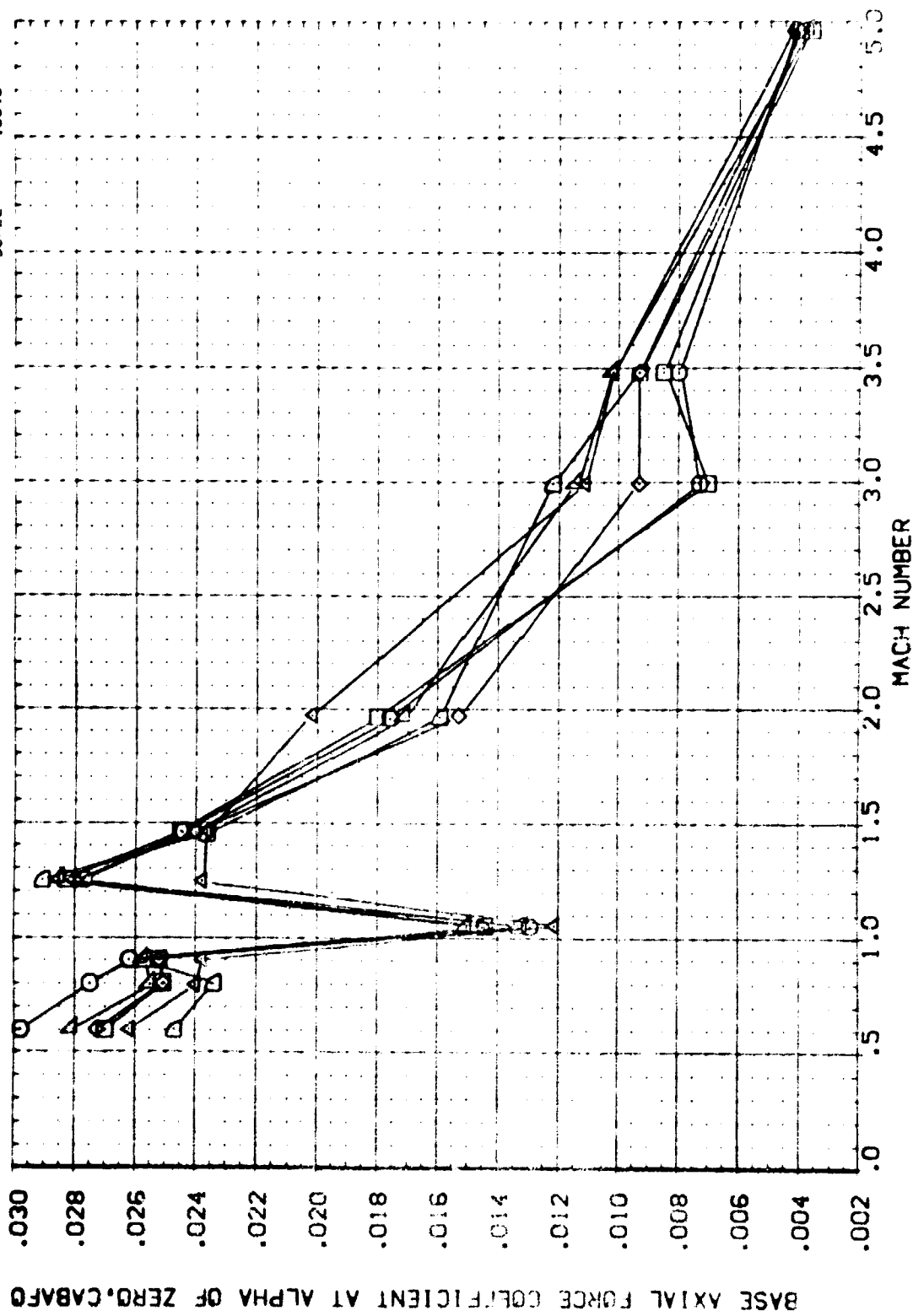


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

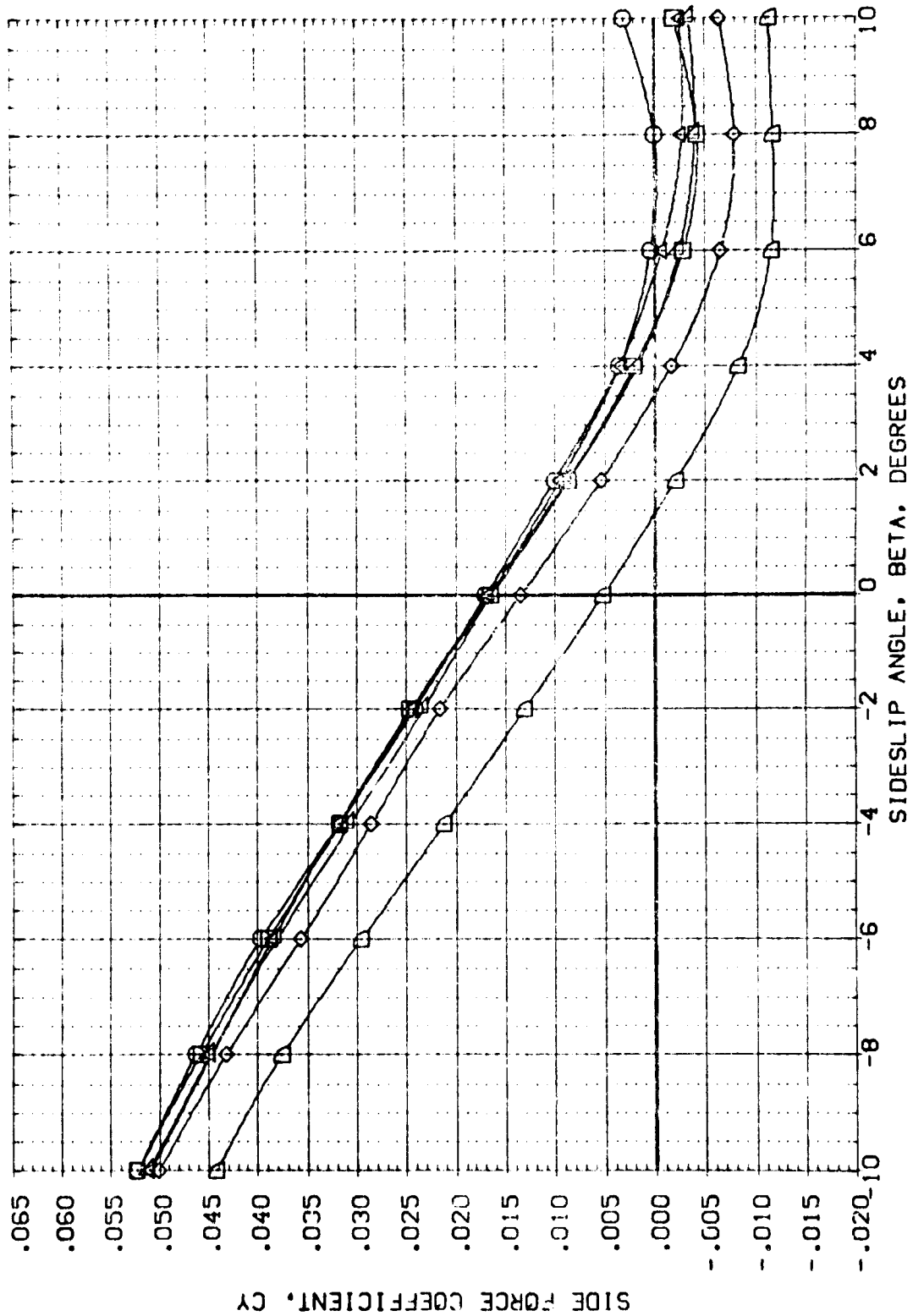
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83501)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.140	SRF 9720 SQ. IN
(C83502)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.140	LRF 5.3130
(C83503)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.140	BRF 5.3130
(C83504)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.280	X400 2.5460
(C83505)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.280	Y400 .0000
(C83506)	MSFC 570(I A3 F)(S3/2)/(O3)/(T9)/(S3/2)	.000	.500	.280	Z400 .0000

SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

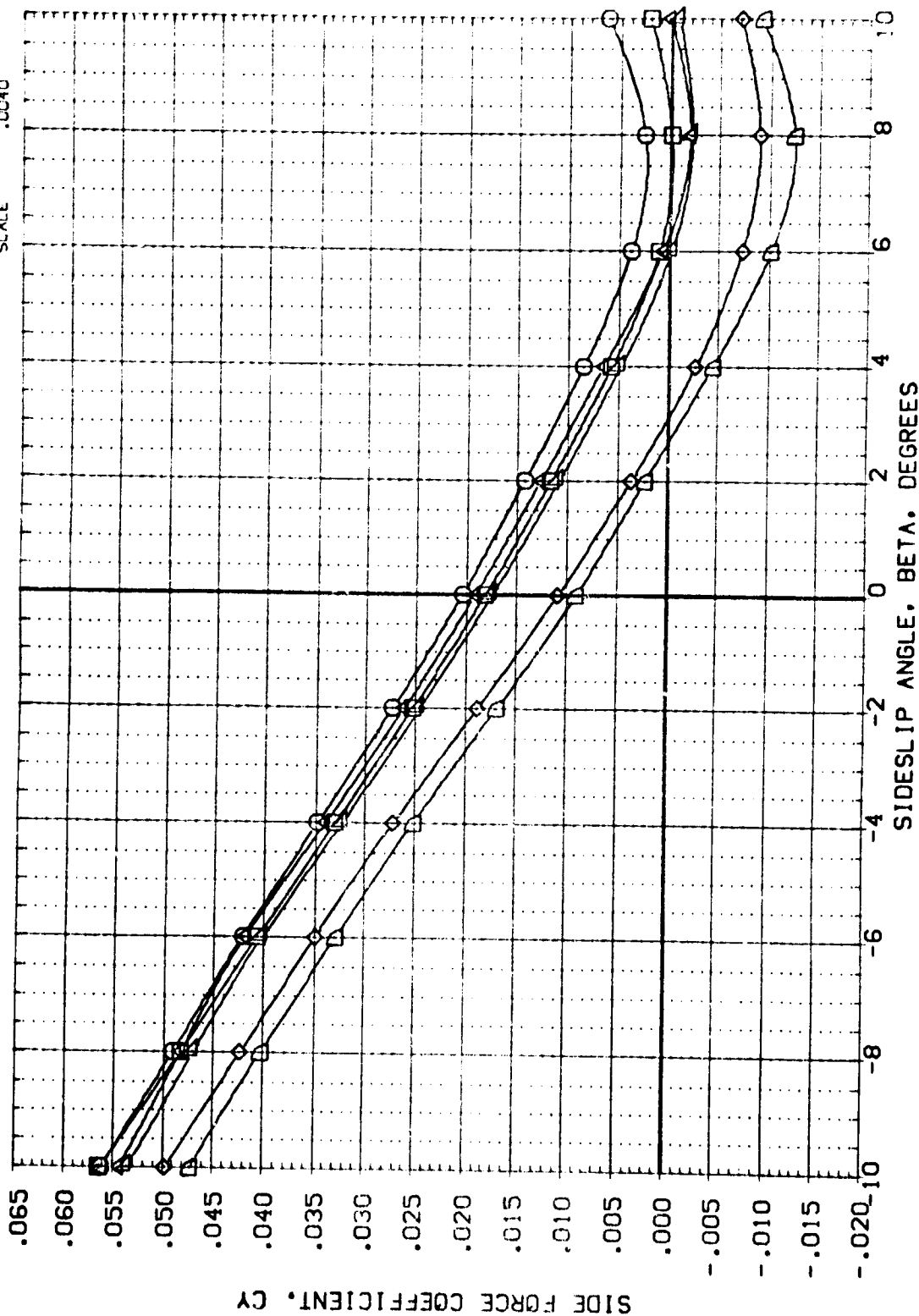
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBINC	DELTA Z	REFERENCE INFORMATION
(AB3508)	D	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.140	SREF .9720 SQ. IN
(AB3509)	D	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.140	LREF 5.3130
(AB3510)	D	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.140	BREF 5.3130
(AB3511)	X	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.283	XMPP 2.5490
(AB3512)	X	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.283	YMPP .0000
(AB3513)	D	MSFC 570((A31F)(S3/2)/(O3))((T9)/(S3/2))	5.000	-1.500	.283	ZMPP .0000
						SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/((T9)/(S3/2))

(A)MACH = .90

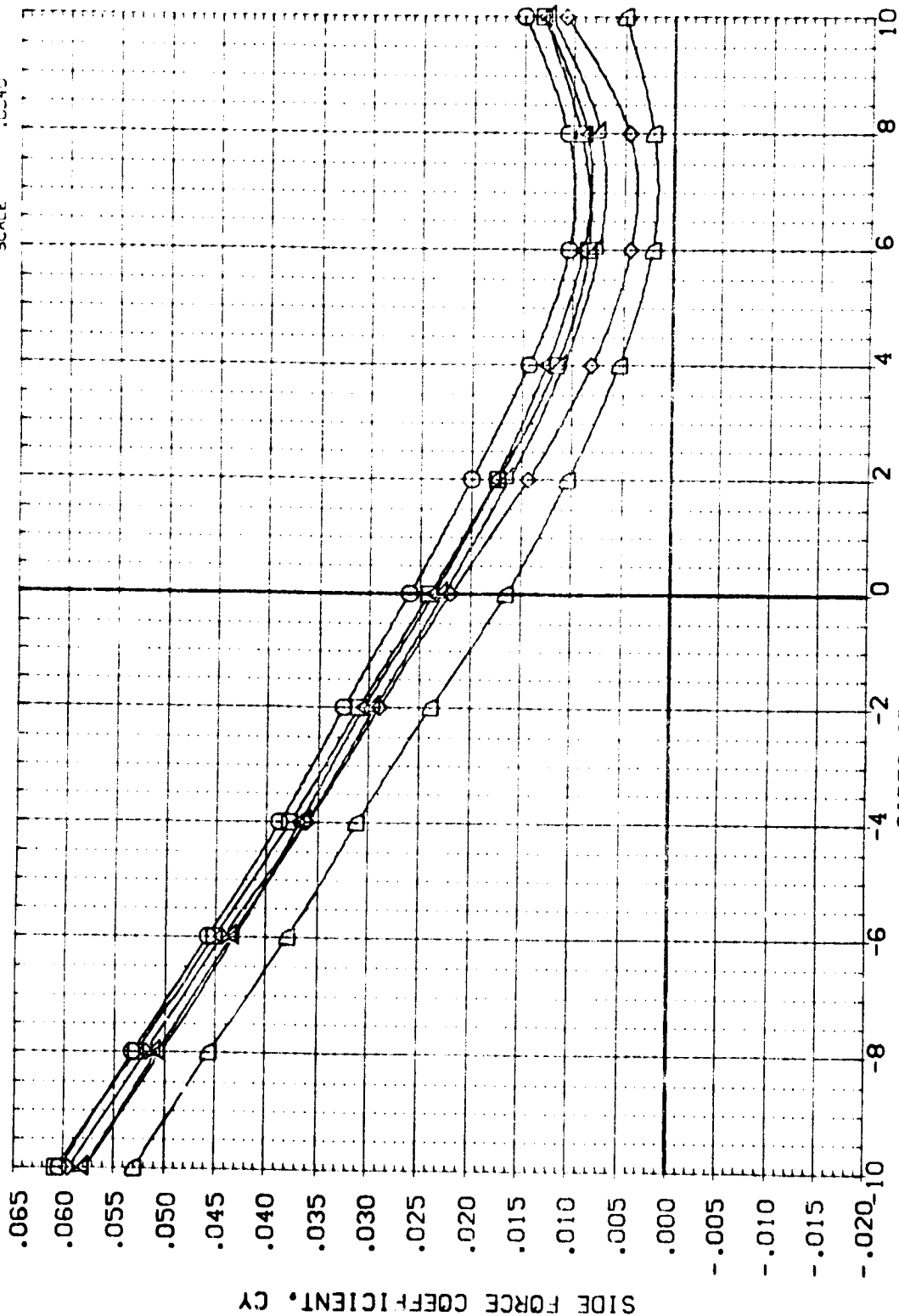
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	SREF .9720 SO. IN
(A83509)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	YMRP .0000 IN.
(A83513)	MSFC 570(I A31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = 1.05

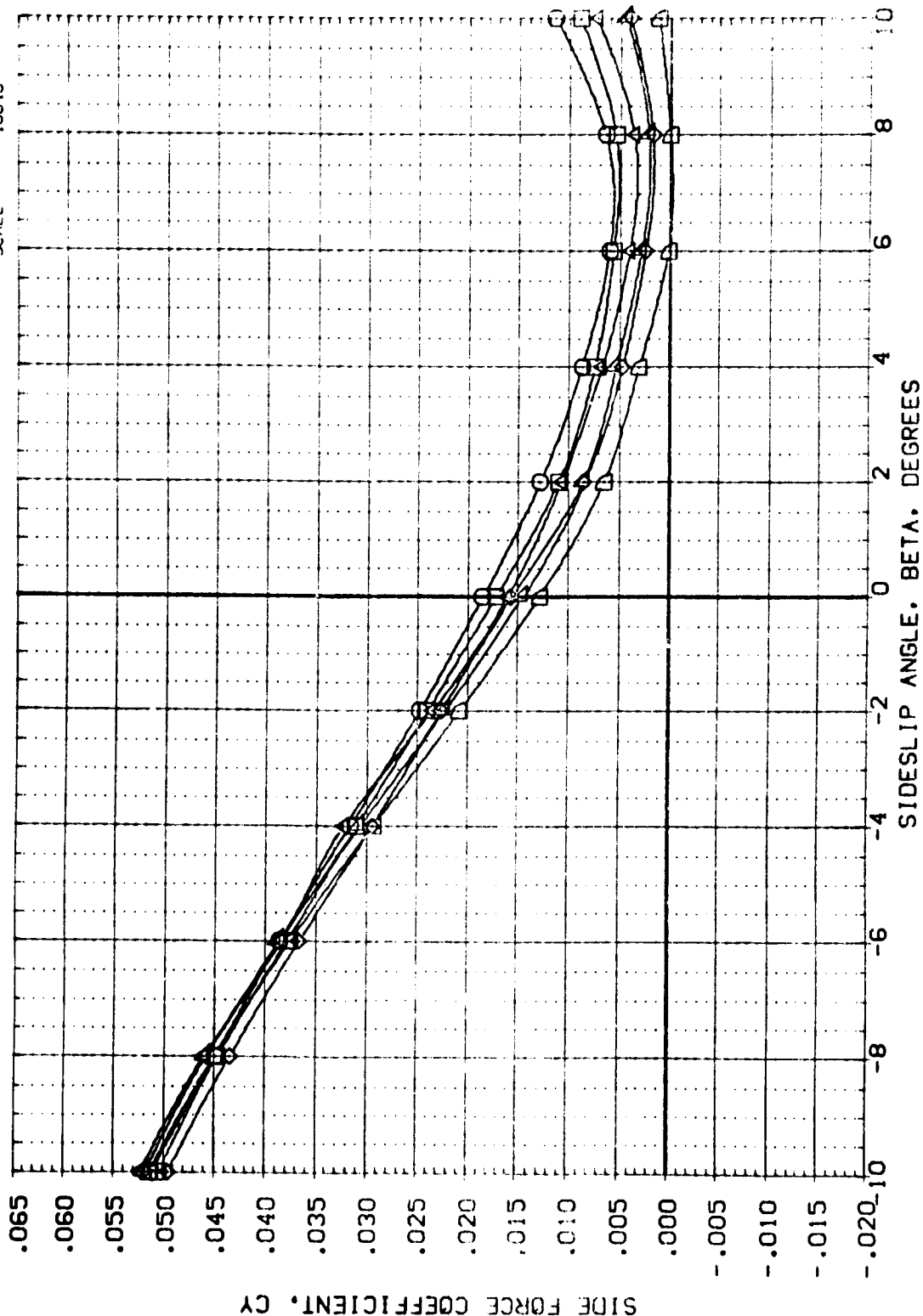
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	SO. IN
(A83S08)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.140	SREF	.9720
(A83S09)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.140	LREF	5.3130
(A83S10)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.140	BREF	5.3130
(A83S11)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.280	YMRP	2.5490
(A83S12)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP	.0000
(A83S13)	MSFC 570(IA31F)(S3/2)/(T9)/(S3/2)	5.000	1.500	.280	SCALE	.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = 1.25

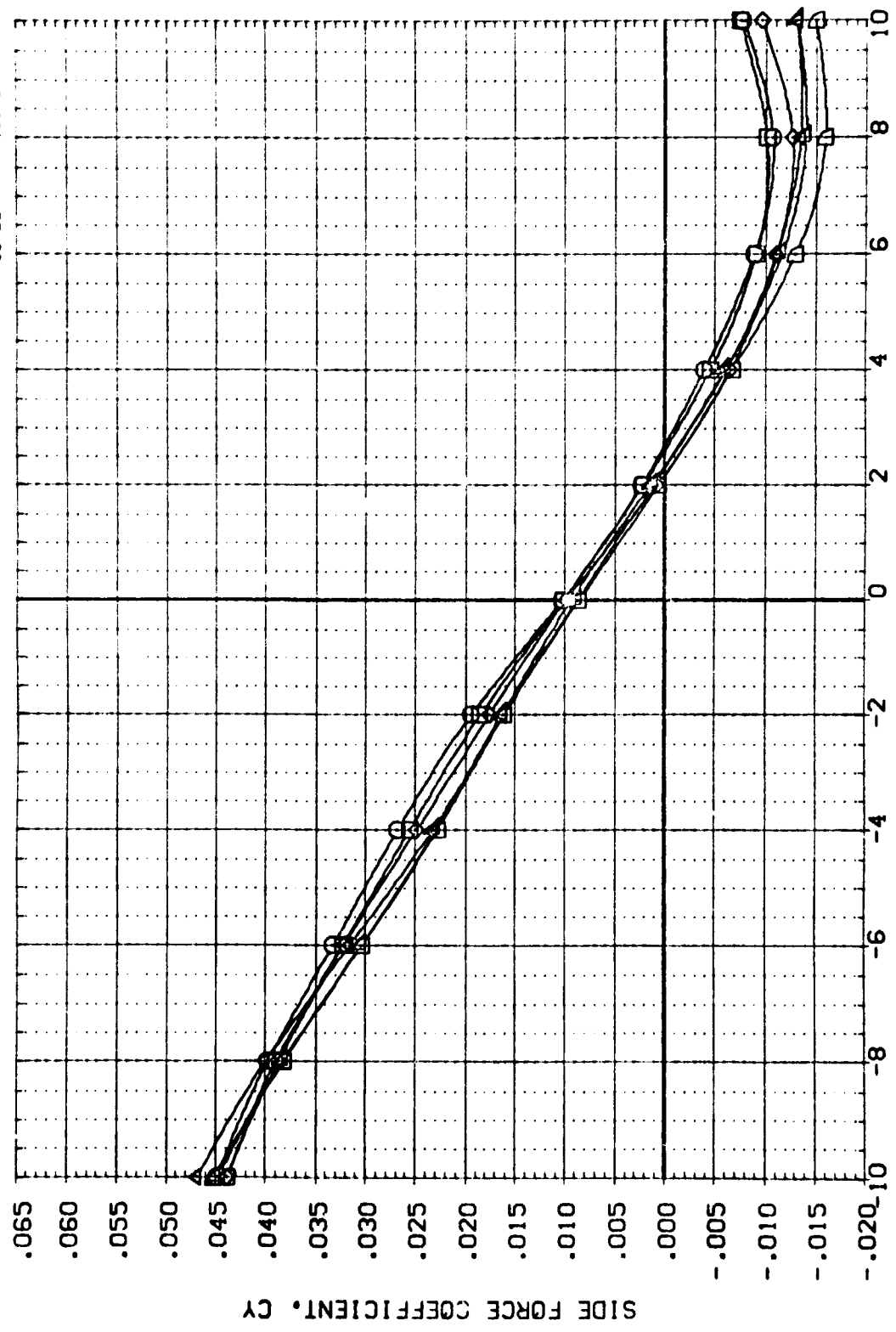
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	-.500	.140	SREF .9720 SQ. IN
(A83509)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	-.500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	-.500	.280	YMRP .0000 IN.
(A83513)	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(O)MACH = 1.46

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	SREF .9720 SQ. IN
(A83509)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	YMRP .0000 IN.
(A83513)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83S08) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

(A83S09) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

(A83S10) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

(A83S11) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

(A83S12) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

(A83S13) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)

ALPHA ORBINC DELTAZ

5.000 -500 .140

5.000 -500 .140

5.000 -500 .140

5.000 -500 .280

5.000 -500 .280

5.000 -500 .280

REFERENCE INFORMATION

SREF .9720 SO. IN

LREF 5.3130 IN.

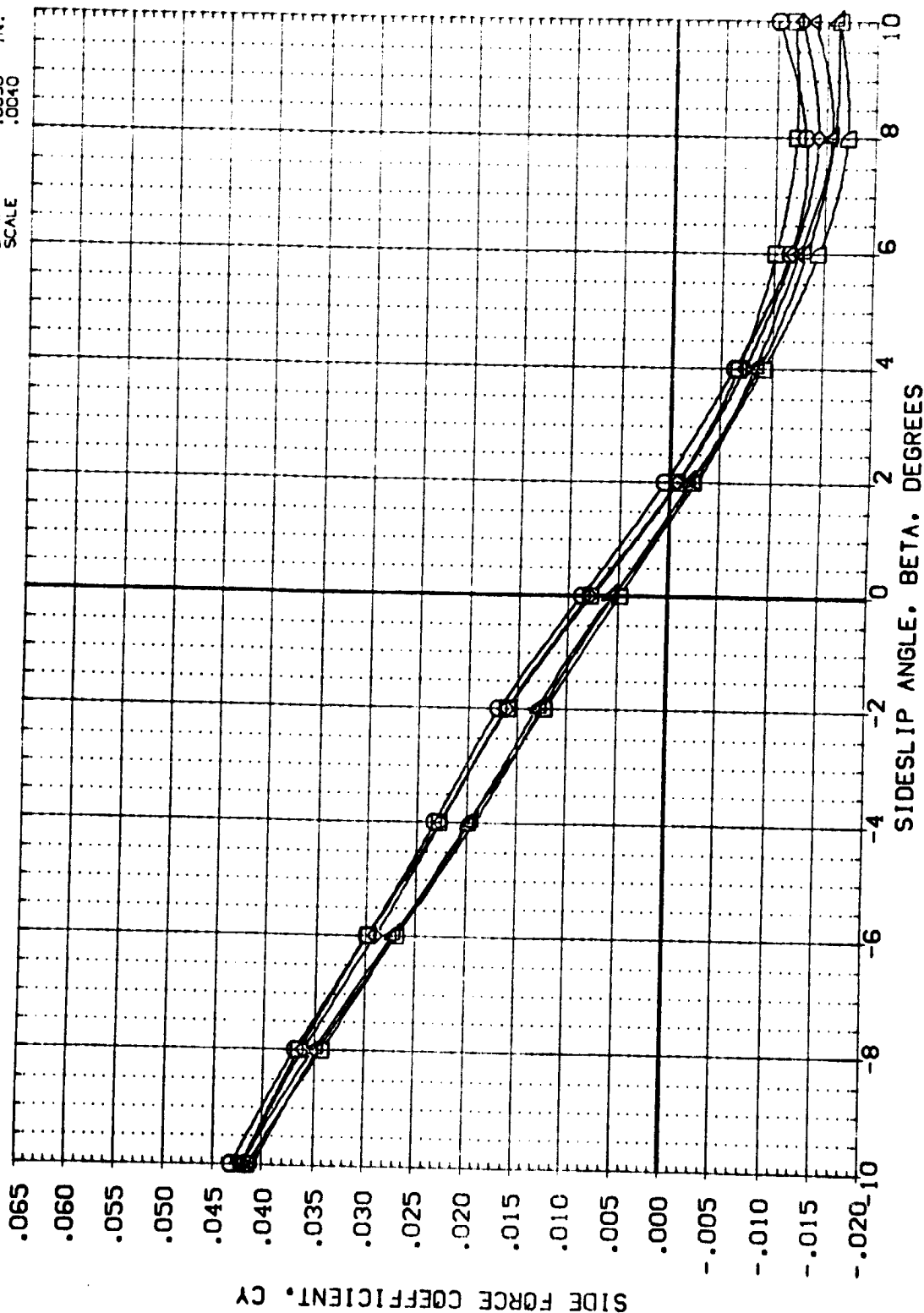
BREF 5.3130 IN.

XMRP 2.5490 IN.

YMRP .0000 IN.

ZMRP .0000 IN.

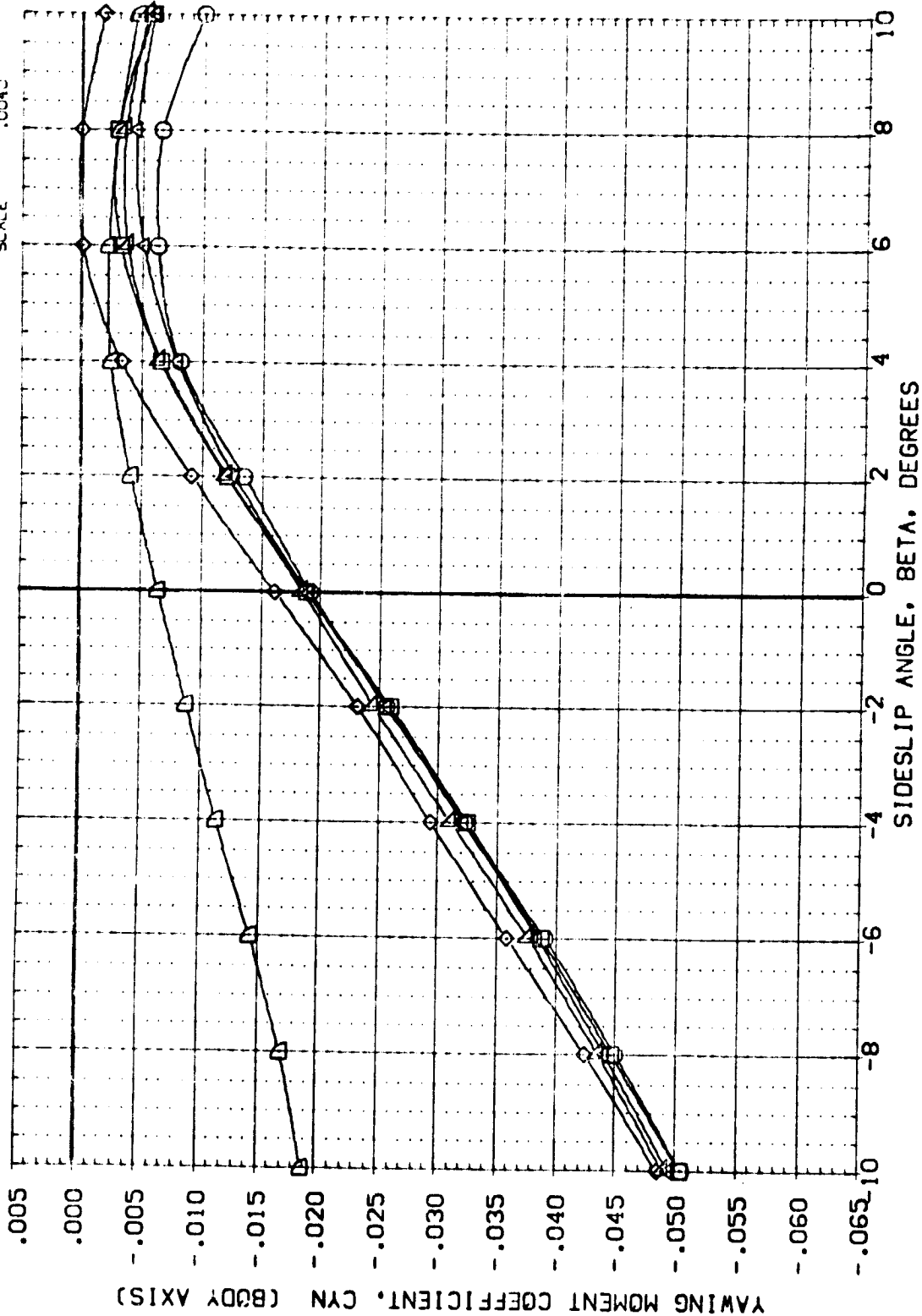
SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(F)MACH = 3.48

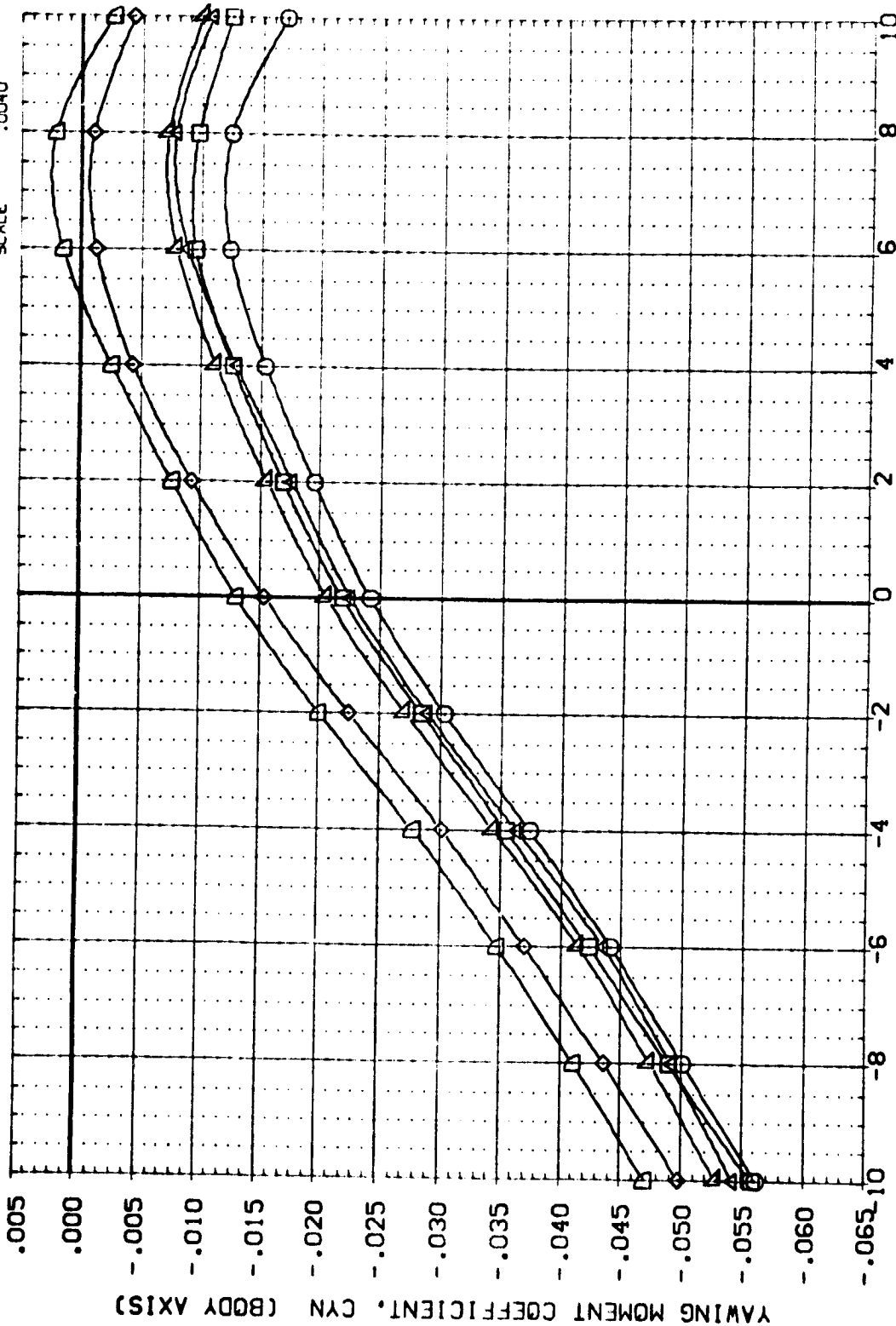
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	SREF 9720 SQ. IN
(A83509)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	.500	.280	YMRP .0000 IN.
(A83513)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A)MACH = .90

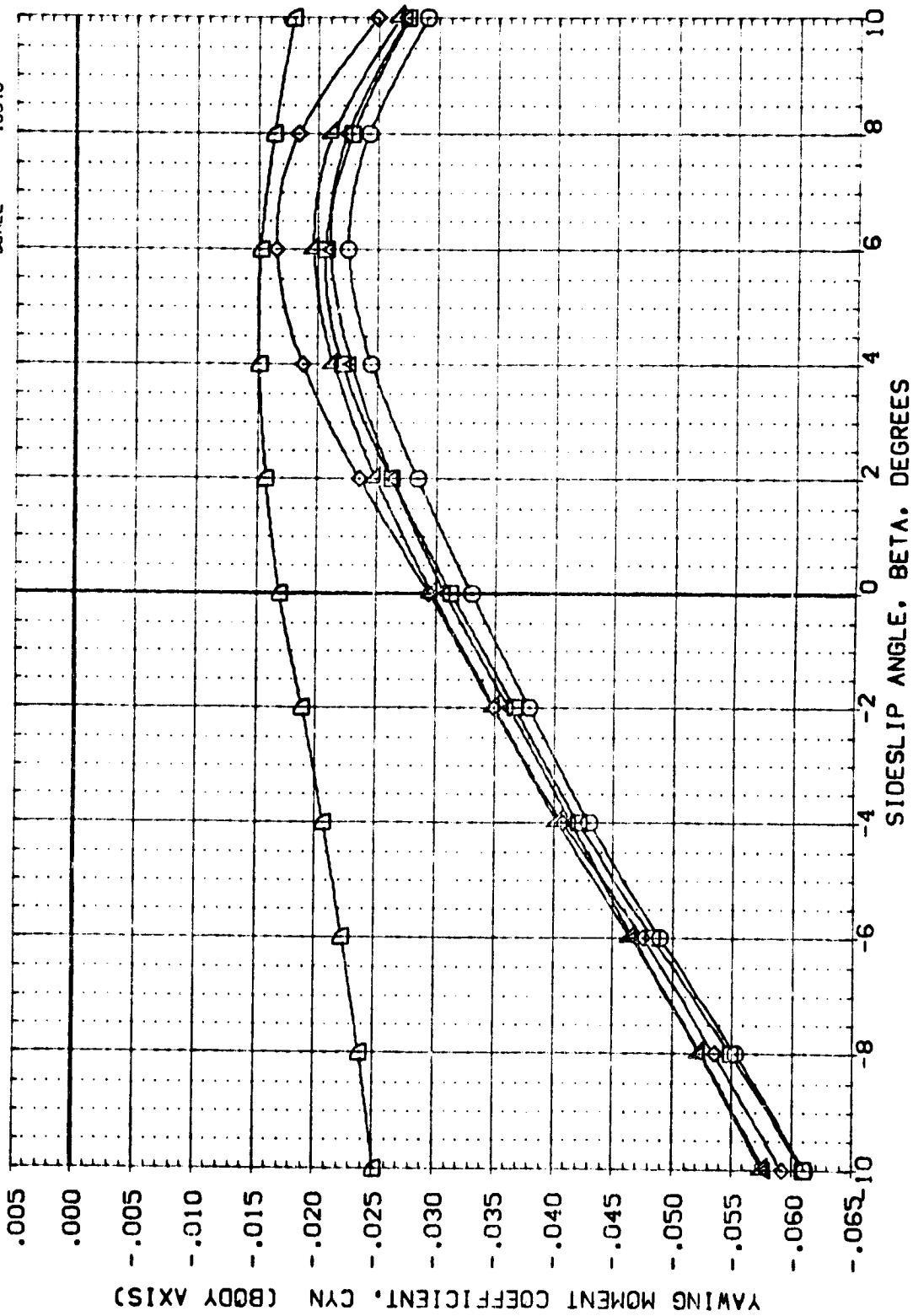
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	SREF .9720 SO. IN
(A83509)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	YMRP .0000 IN.
(A83513)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = 1.05

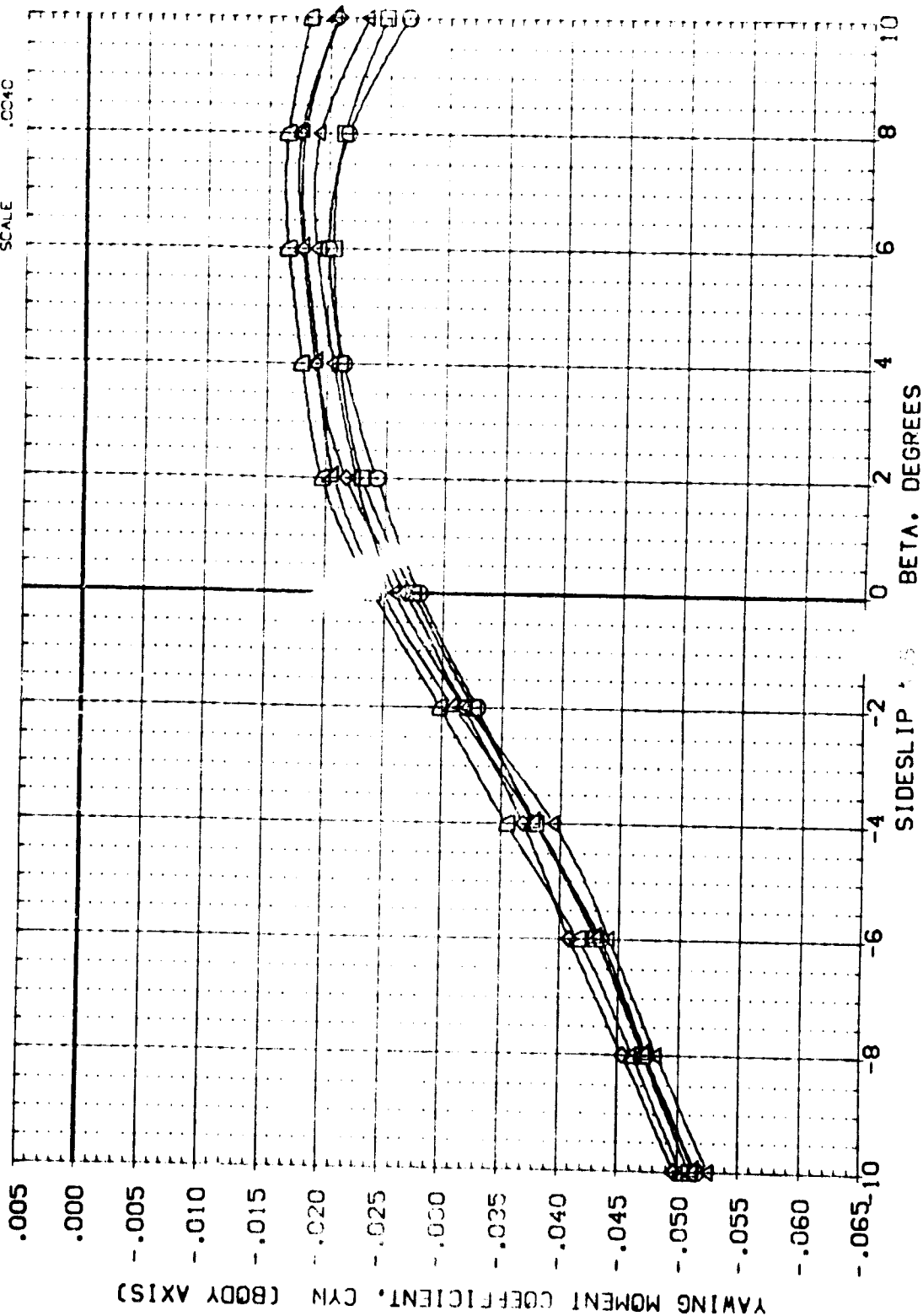
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION IN
(AB3508)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	SREF .9720 SQ. IN.
(AB3509)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	LREF 5.3130 IN.
(AB3510)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.140	BREF 2.5490 IN.
(AB3511)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	YREF .0000 IN.
(AB3512)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	ZREF .0000 IN.
(AB3513)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	5.000	-500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = 1.25

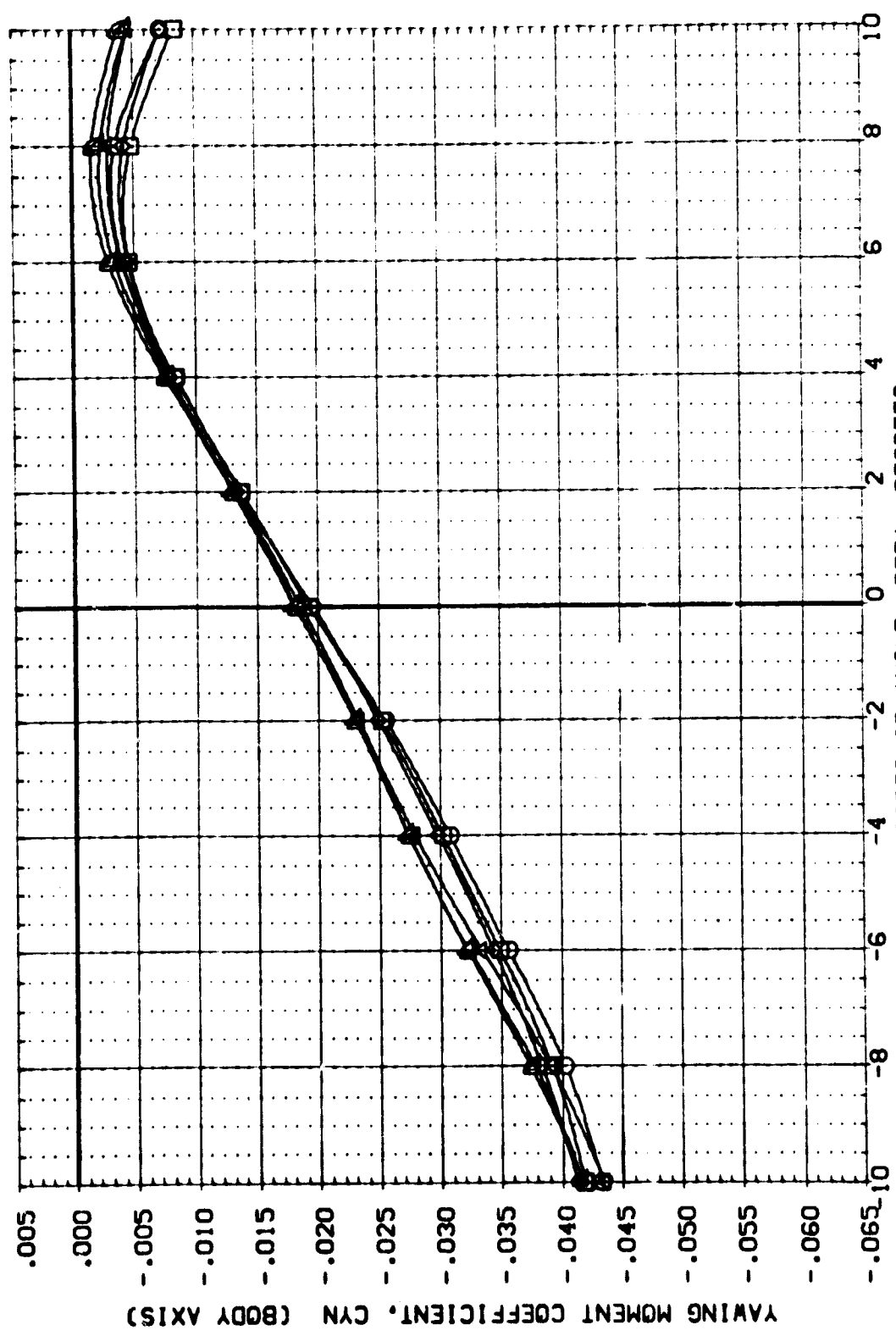
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(AB3508)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	-500	.140	SREF 9720 SQ. IN
(AB3509)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	-500	.140	LREF 5.3130 IN.
(AB3510)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	1500	.140	BREF 5.3130 IN.
(AB3511)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	-500	.280	XMPP 2.5490 IN.
(AB3512)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	-500	.280	YMPP .0000 IN.
(AB3513)	MSFC 570((A31F)(S3/2))((03)/((T9)/(S3/2))	5.000	1500	.280	ZMPP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/((T9)/(S3/2))

(0)MACH = 1.46

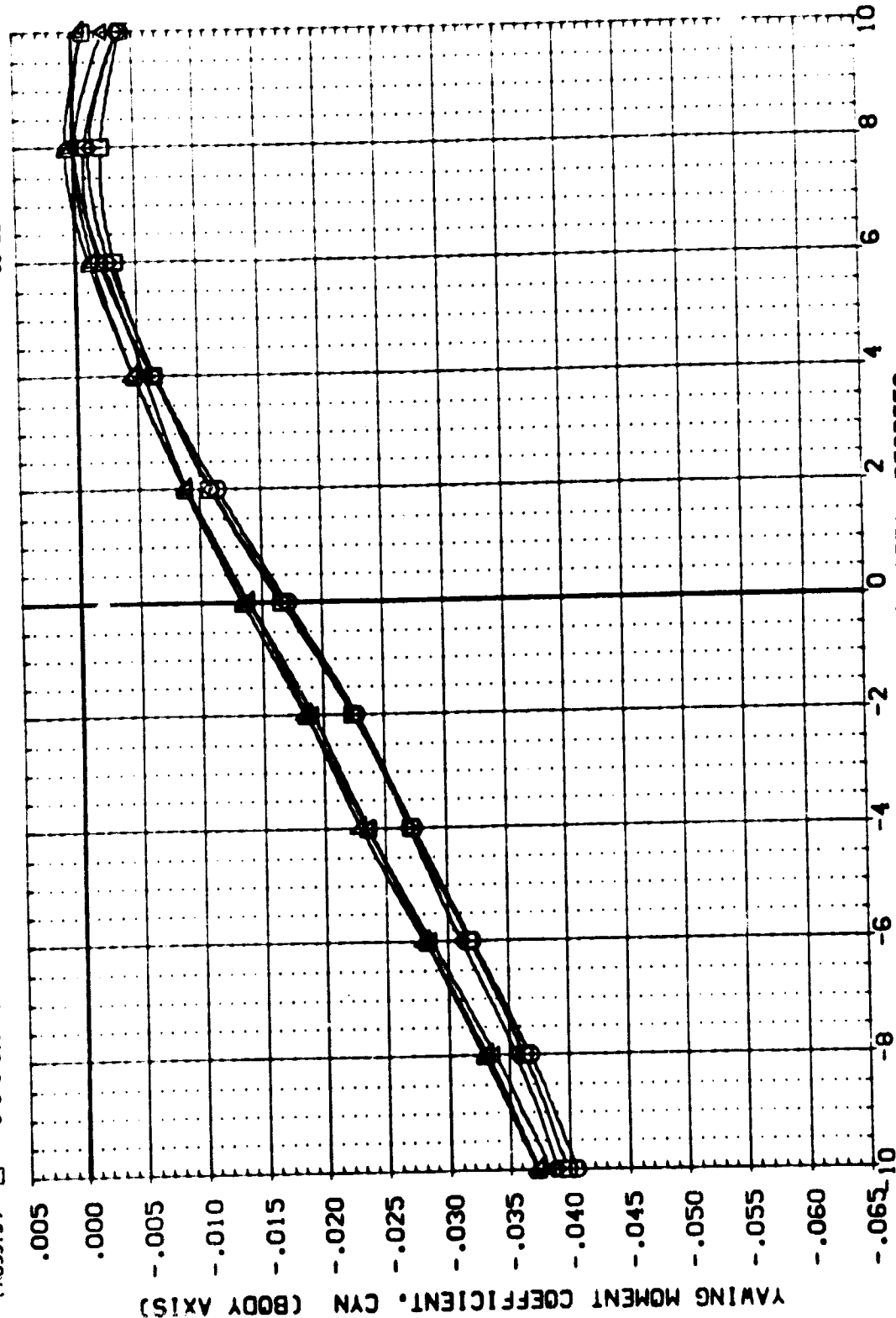
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	SREF .9720 SQ. IN.
(A83509)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	YMRP 2.5490 IN.
(A83512)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	ZMRP .0000 IN.
(A83513)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION	IN.	SCALE
[AB3508]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	500	.140	SREF	.9720	.0040
[AB3508]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	500	.140	LREF	5.3130	
[AB3510]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	1.500	.140	BREF	5.3130	
[AB3511]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	500	.280	YMRP	2.5490	
[AB3512]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	500	.280	ZMRP	.0000	
[AB3513]	MSFC 570((IA3IF)(S3/2)/(O3)/(T9)/(S3/2))	5.000	1.500	.280	SCALE	.0000	



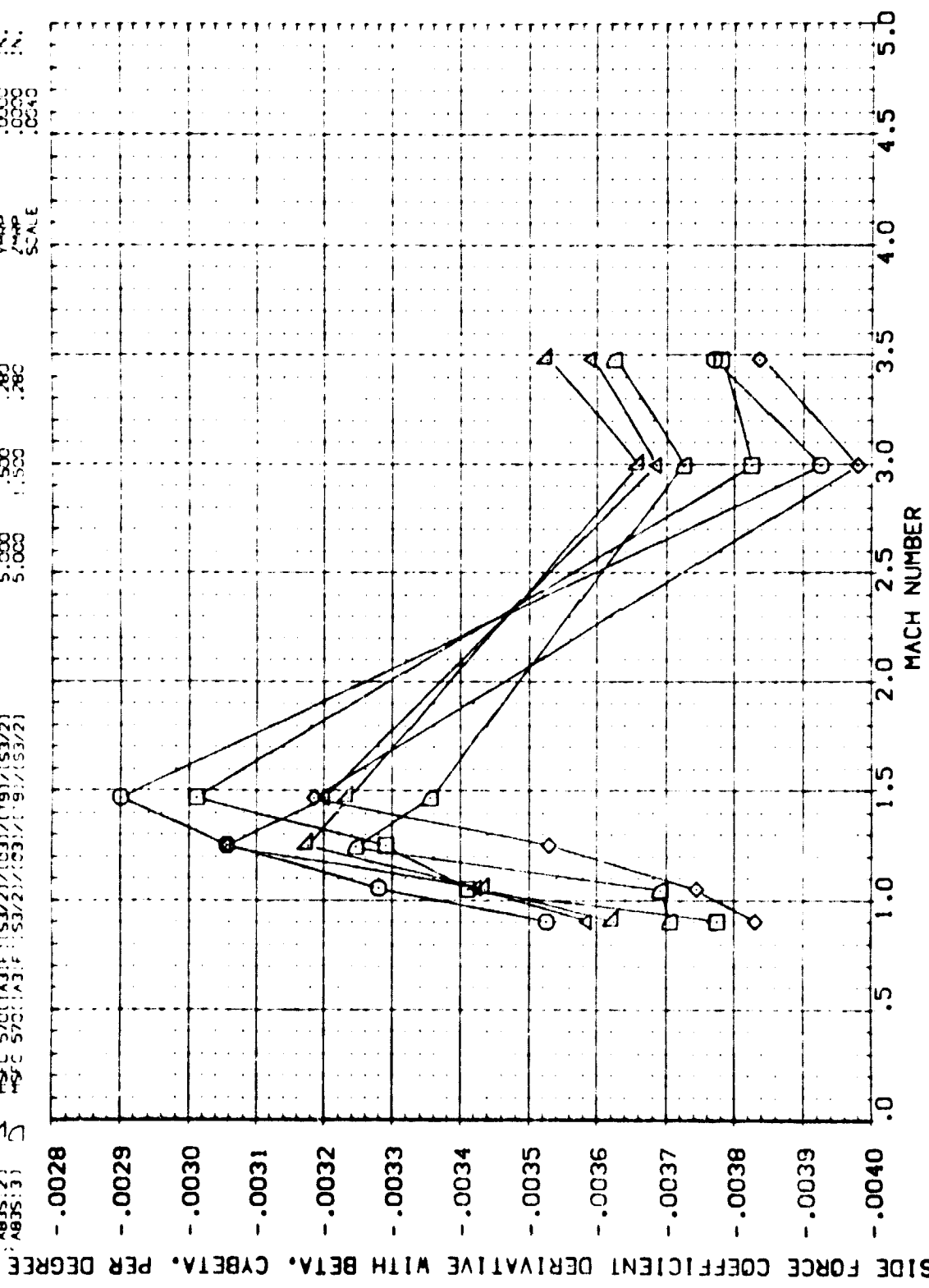
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(F)MACH = 3.48

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.140	SPEC 5720 SQ. IN
(A83509)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.140	LREF 5.313C
(A83510)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.140	BREF 5.313C
(A83511)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.280	X422 2.549C
(A83512)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.280	Y422 .000C
(A83513)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.280	Z422 .000C
(A83514)	MSFC 570 (A31F) (S3/2) (03) (19) (S3/2)	5.000	-500	.280	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83508) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

(A83509) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

(A83510) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

(A83511) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

(A83512) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

(A83513) MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))

REFERENCE INFORMATION

SREF 9720 SC IN

LREF 5.3130 IN

BREF 5.3130 IN

XMRP 2.5490 IN

YMRP .0000 IN

ZMRP .0000 IN

SCALE .0040

ALPHA 5.000

ORBITAL DELTA2

5.000 .140

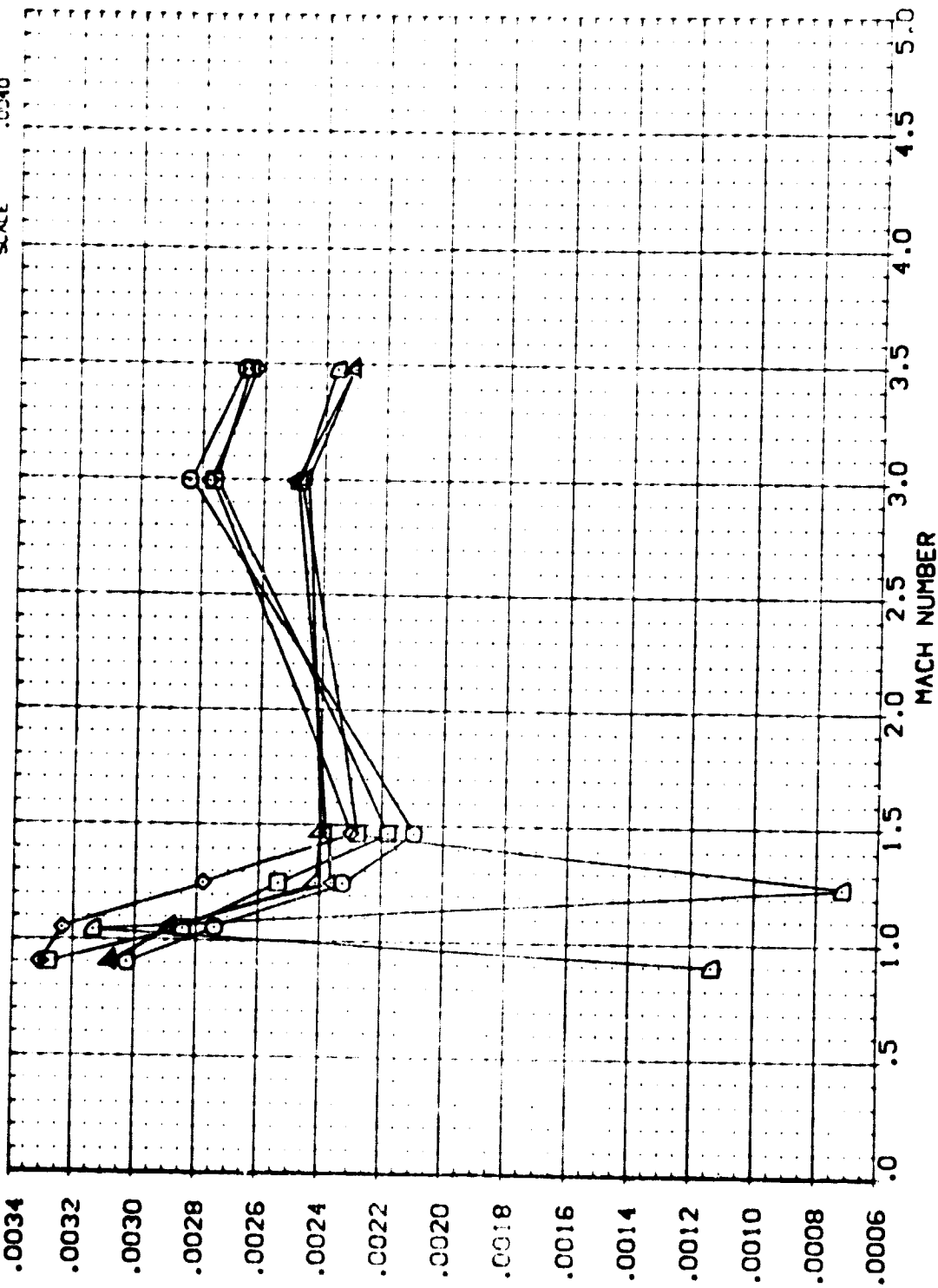
5.000 .140

5.000 .140

5.000 .280

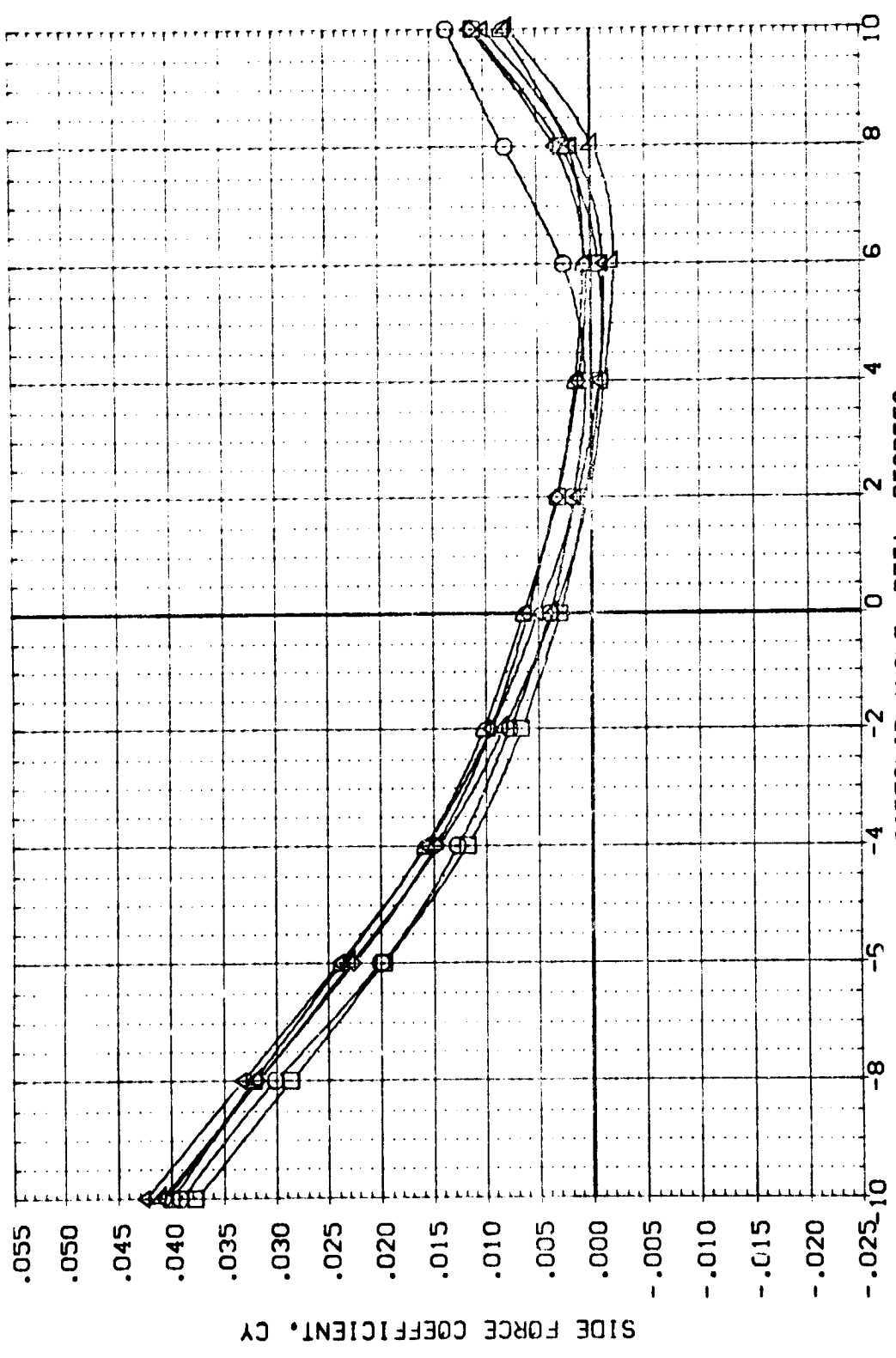
5.000 .280

5.000 .280



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

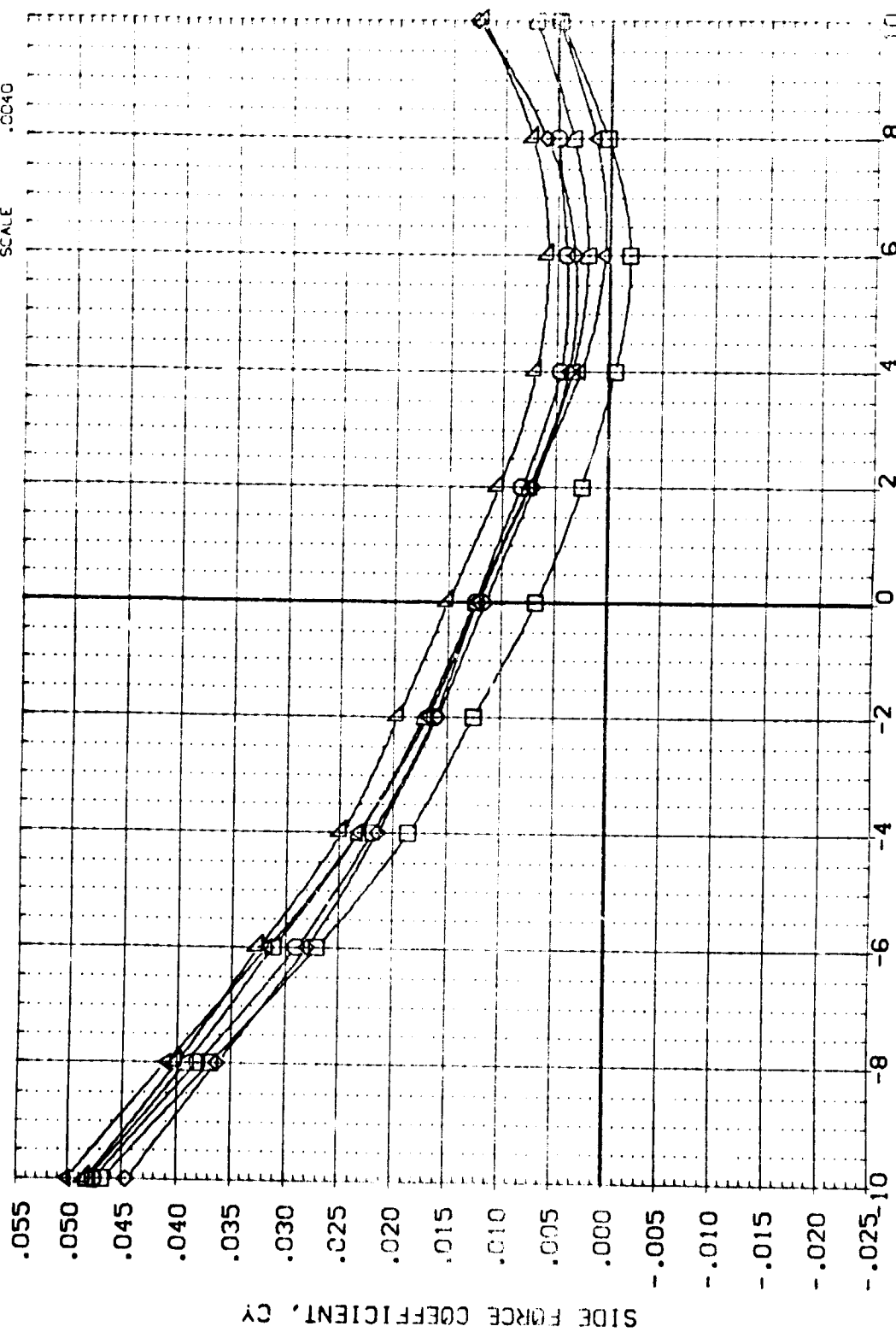
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(A835:14)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	SREF 9720 50. IN
(A835:15)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN
(A835:16)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN
(A835:17)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	XMRO 2.5490 IN
(A835:18)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	YMRO .0000 IN
(A835:19)	MSFC 570(A3:F)(S3/2)/(03)/(19)/(S3/2)	-5.000	-500	.140	ZMRO .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

(A)MACH = .90

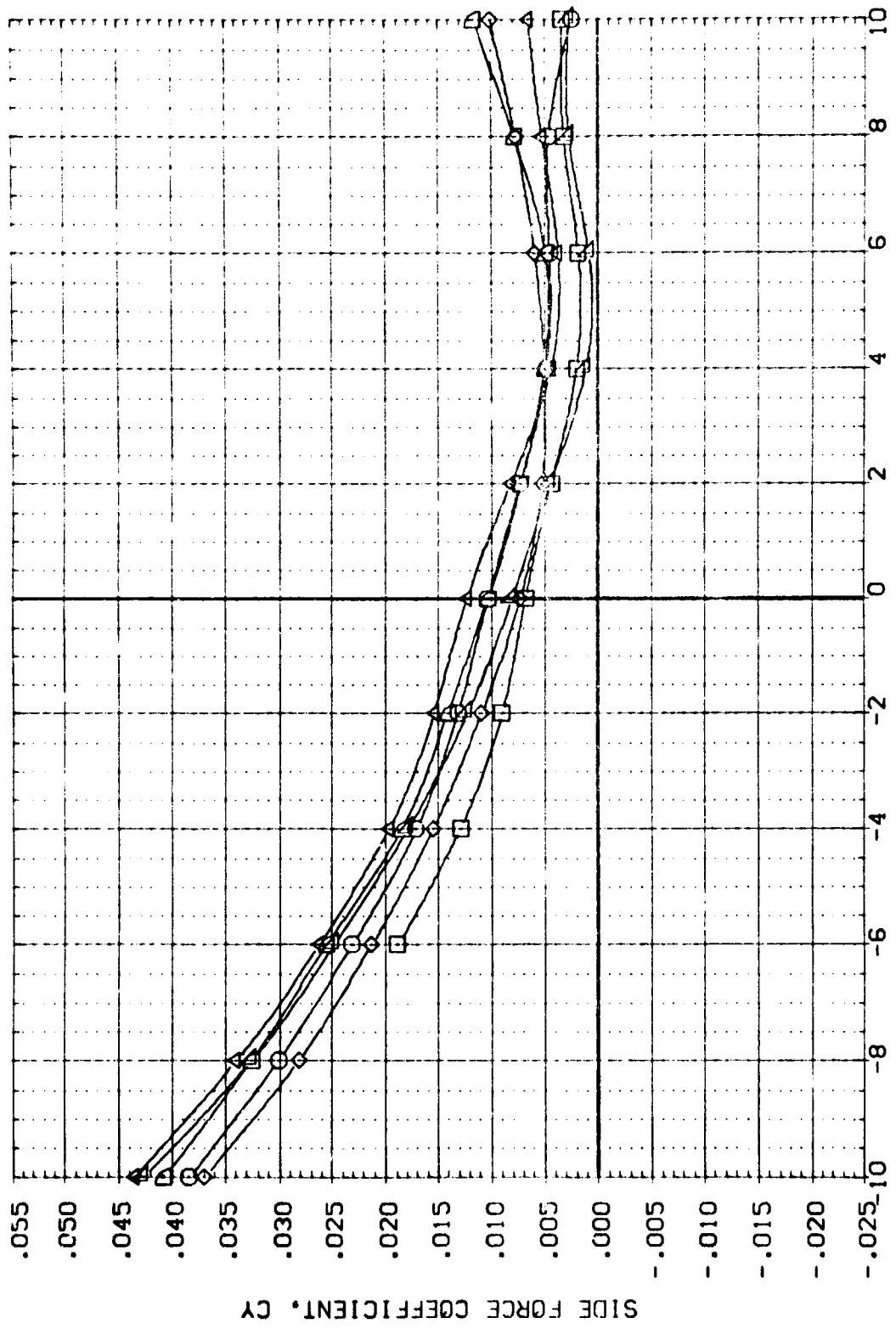
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83514)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	SREF 9720 SC. IN
(P83315)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	LREF 5.3130
(A83516)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	SREF 5.3130
(A83517)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	YREF 2.5490
(A83518)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	YREF .0000
(A83519)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	YREF .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(B)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(AB3S14)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	SREF .9720 SG. IN
(AB3S15)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	LREF 5.3130 IN.
(AB3S16)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	BREF 5.3130 IN.
(AB3S17)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	YMRP 2.5490 IN.
(AB3S18)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	ZMRP .0000 IN.
(AB3S19)	MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2))	-5.000	.500	.140	SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A835:14) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

(A835:15) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

(A835:16) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

(A835:17) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

(A835:18) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

(A835:19) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)

ALPHA ORBINC DELTAZ

-5.000 -500 .140

-5.000 -500 .140

-5.000 -500 .140

-5.000 -500 .140

-5.000 -500 .140

-5.000 -500 .140

REFERENCE INFORMATION

SREF .9720 SG. IN

LREF 5.3130

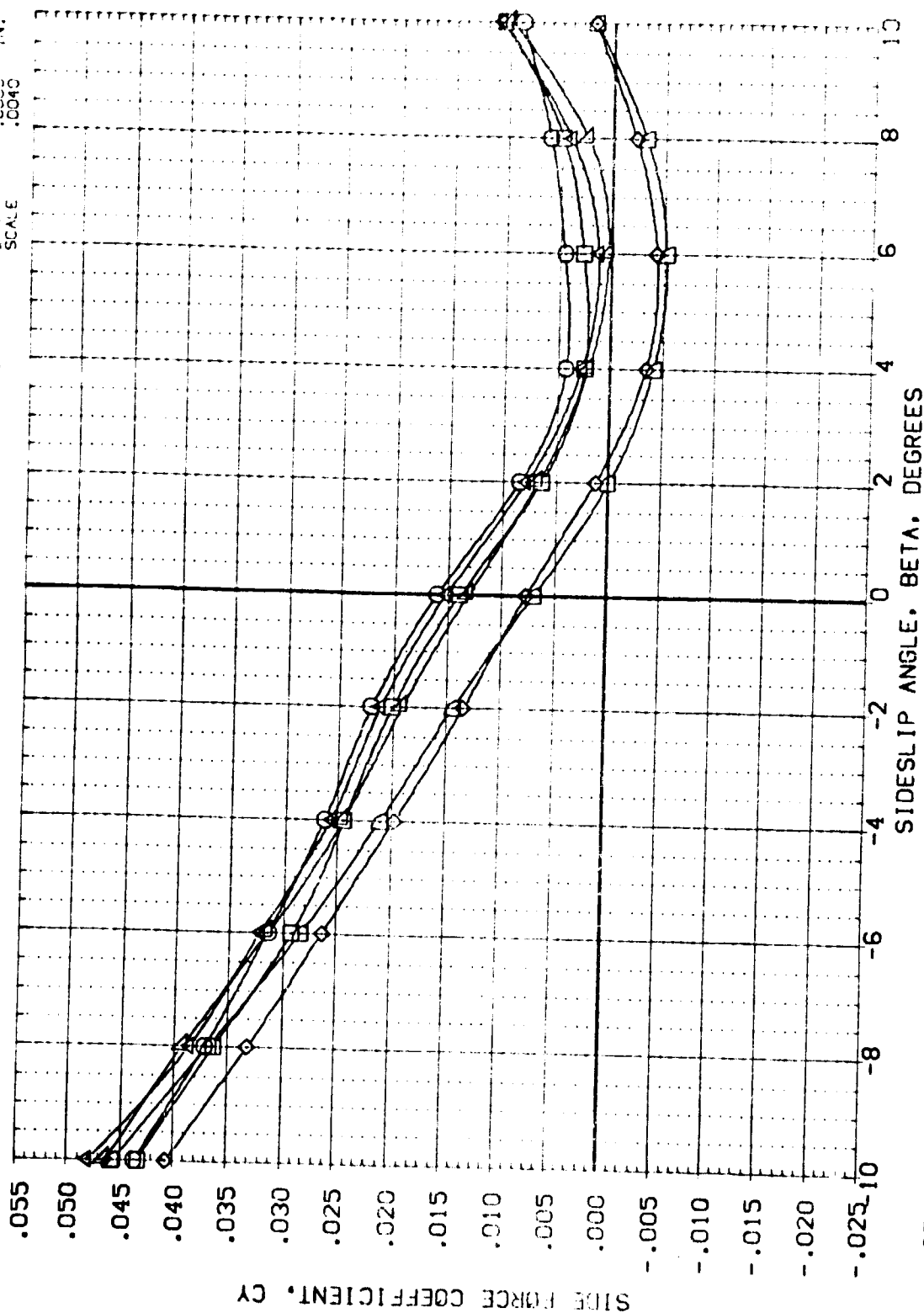
BREF 5.3130

XMRP 2.5490

YMRP .0000

ZMRP .0000

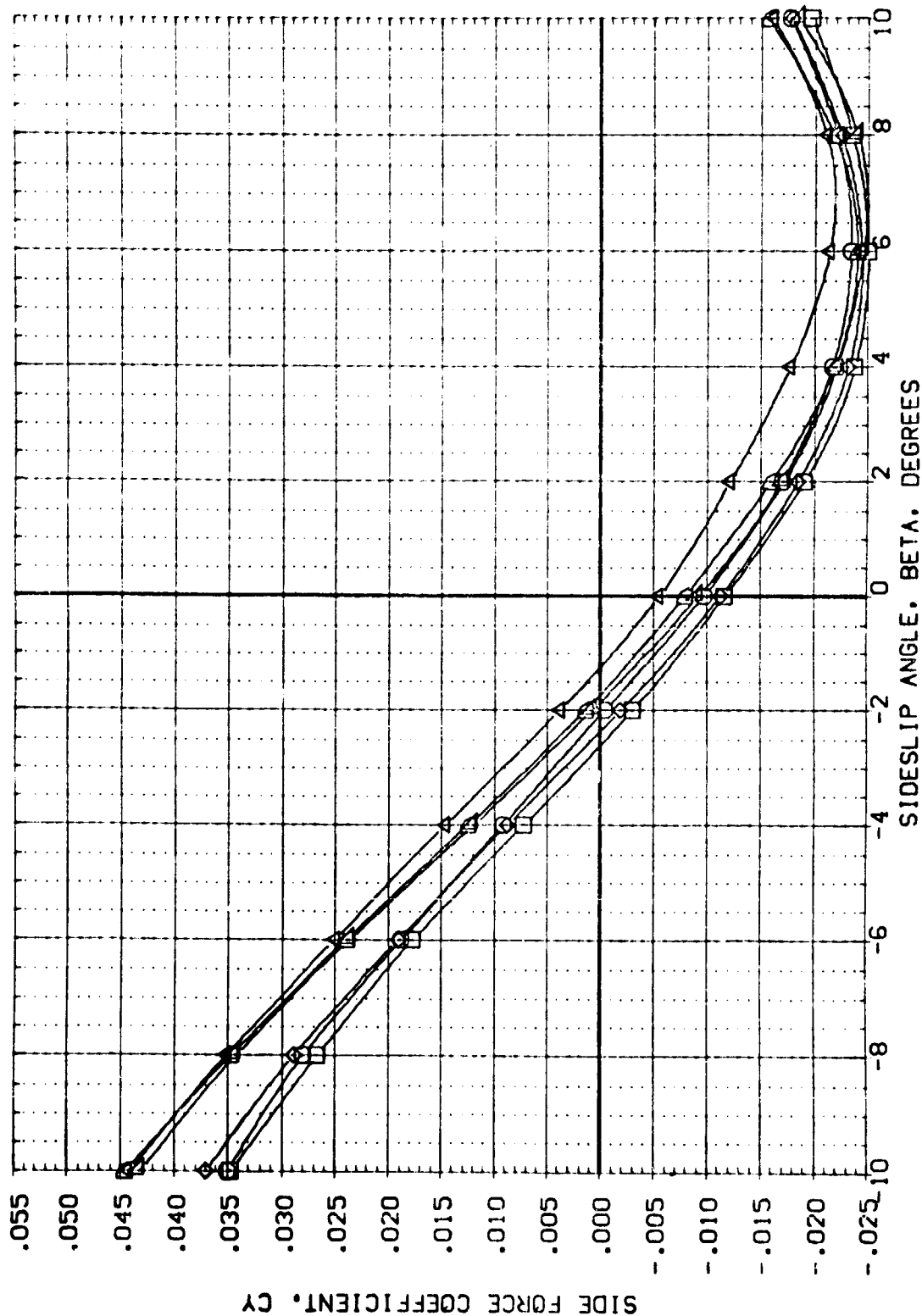
SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(D)MACH = 1.47

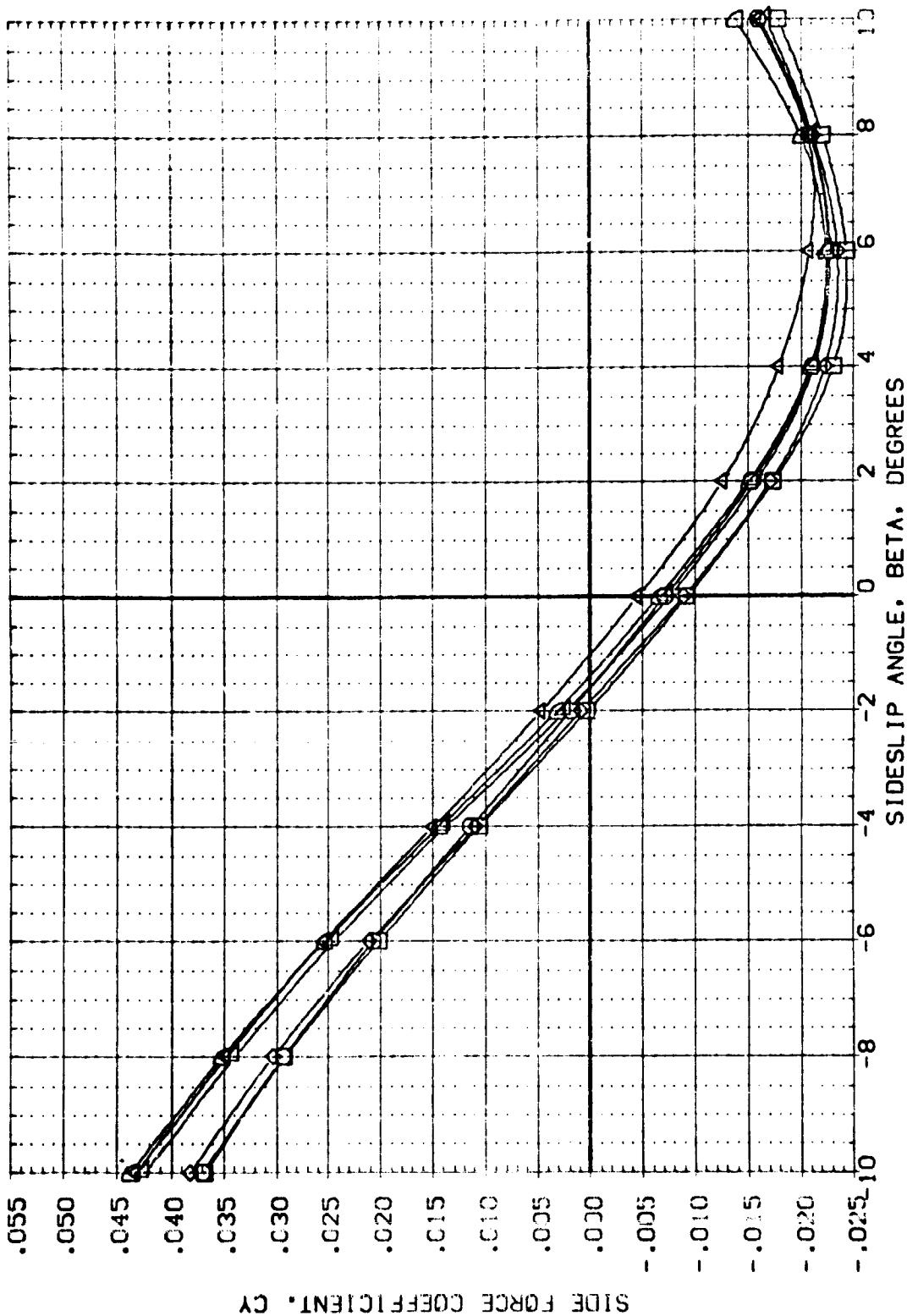
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[A83514]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	SREF .9720 SO. IN
[A83515]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN
[A83516]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN
[A83517]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	XMRP 2.5490 IN
[A83518]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	YMRP .0000 IN
[A83519]	MSFC 570(I31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(E)MACH = 2.99

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBINC	DELTA Z	REFERENCE INFORMATION
(AB3S14)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	SREF .9720 SQ. IN
(PB3S15)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	LREF 5.3130 IN.
(AB3S16)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	BREF 5.3130 IN.
(AB3S17)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	YMRP 2.5490 IN.
(AB3S18)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	ZMRP .0000 IN.
(AB3S19)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-1.500	.140	SCALE .0040

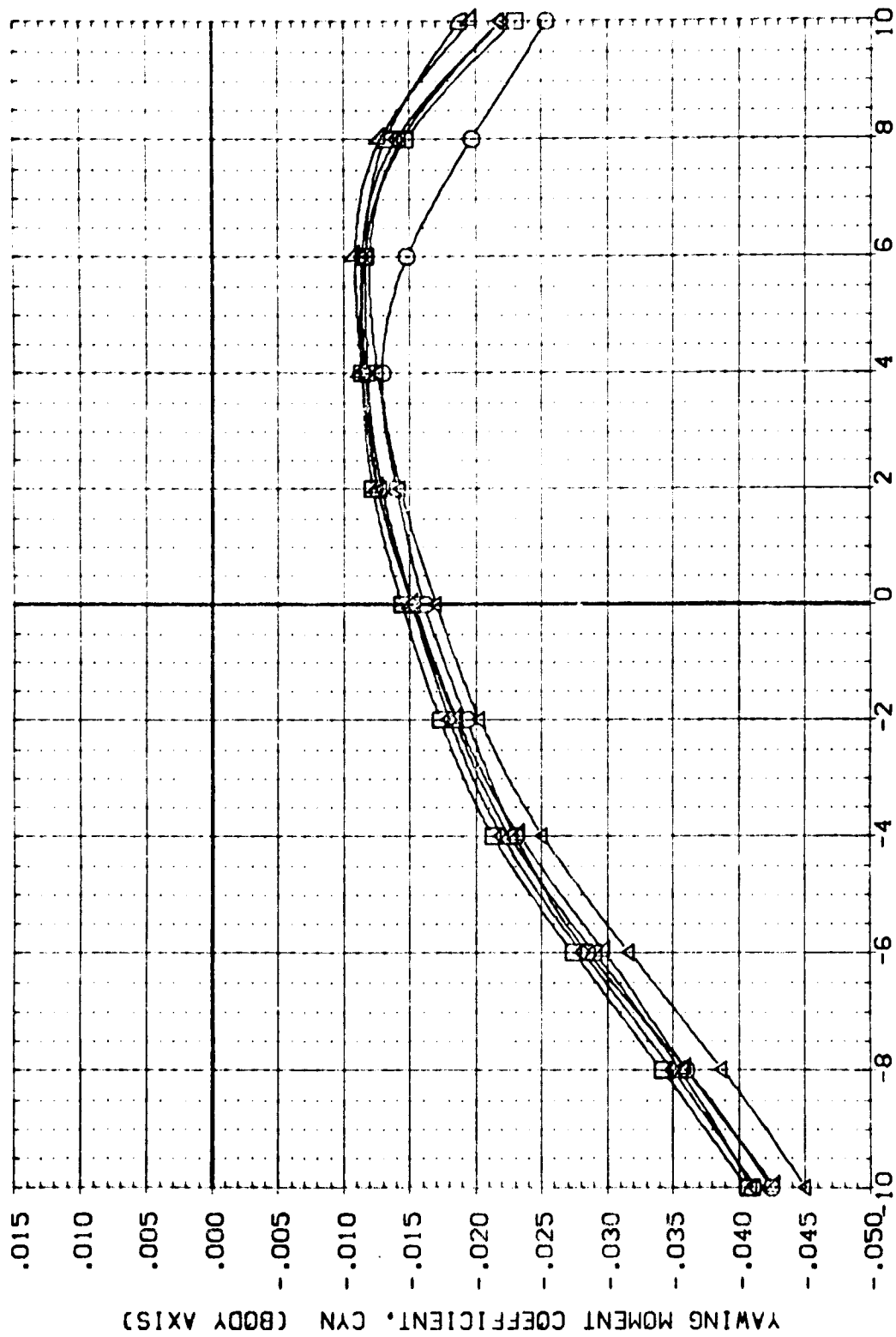


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(F)MACH = 3.48

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION	IN
[A83514]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	SREF	.9720
[A83515]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	LREF	5.3130
[A83516]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	BREF	5.3130
[A83517]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	XMRP	2.5490
[A83518]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	YMRP	.0000
[A83519]	MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)	-5.000	-500	.140	ZMRP	.0000
					SCALE	.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(A83514) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

(A83515) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

(A83516) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

(A83517) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

(A83518) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

(A83519) MSFC 570((A31F)(S3/2)/((03)/(19)/(S3/2))

REFERENCE INFORMATION

SREF 5720 SQ. IN

LREF 5.3130 IN

BREF 5.3130 IN

YMRP 2.5490 IN

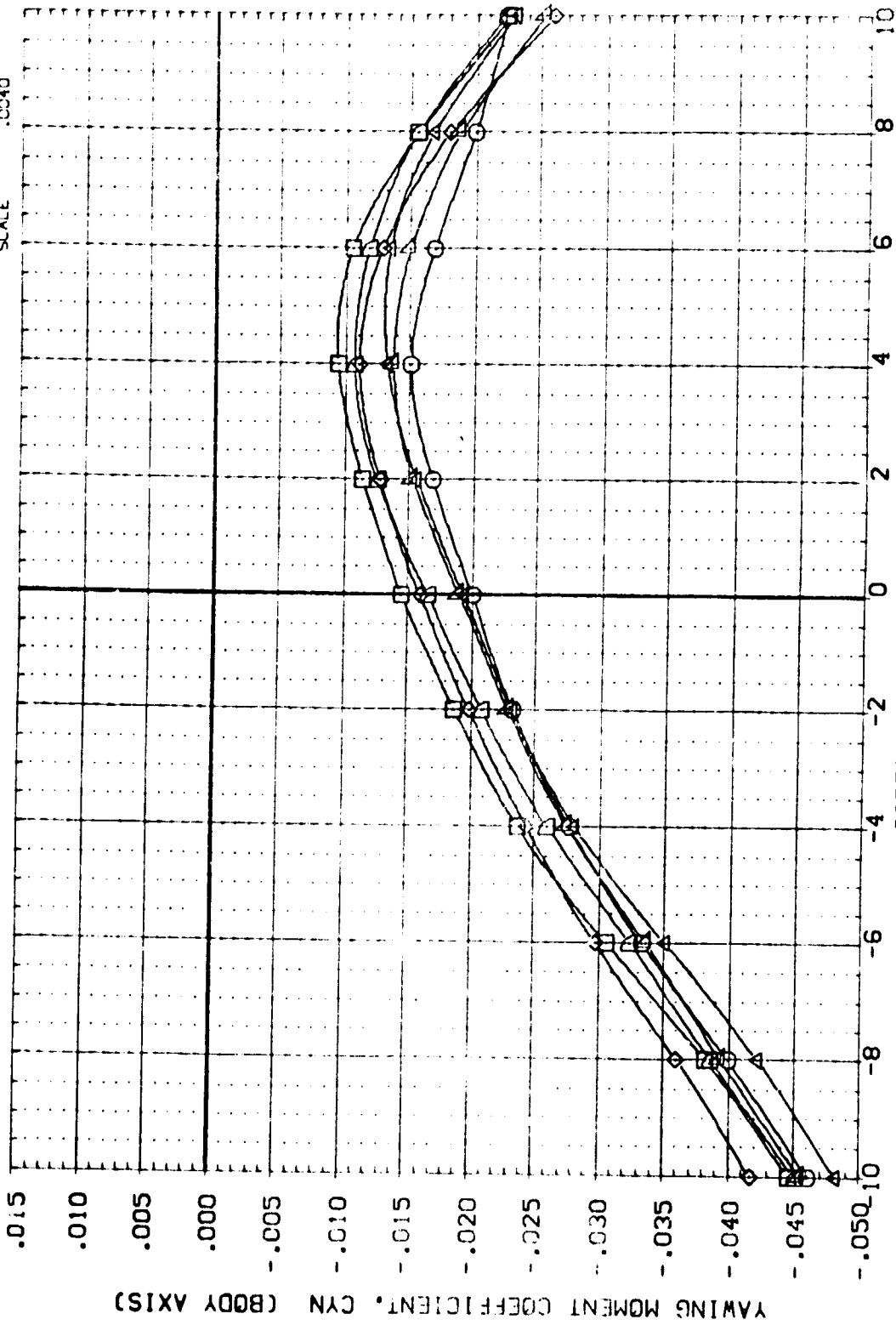
ZMRP .0000 IN

SCALE .0040

ALPHA -5.000

ORBITAL -500

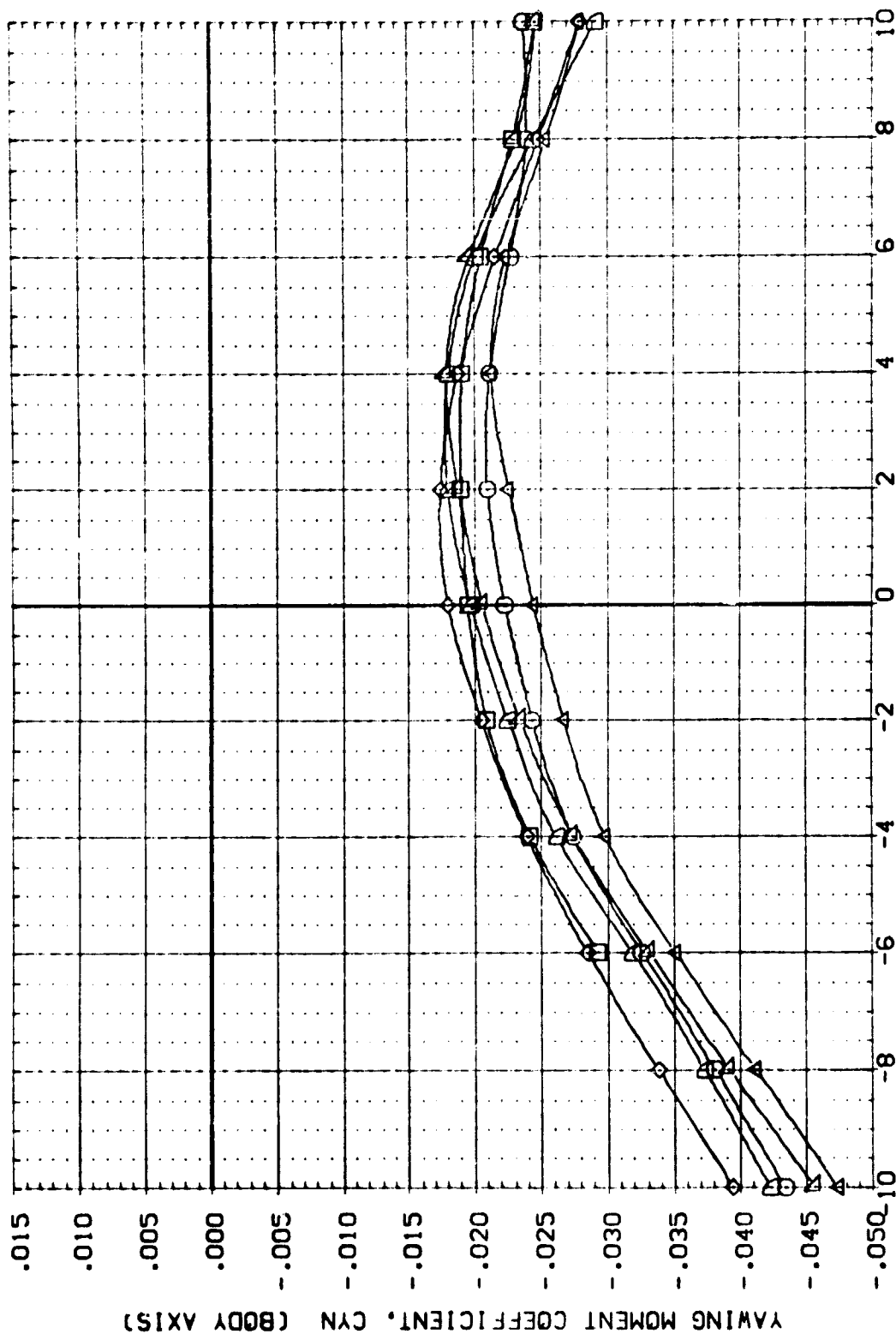
DELTA Z .140



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)/(S3/2)

(B)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(AB3S14)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	SREF .9720 SO. IN
(AB3S15)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	LREF 5.3130 IN.
(AB3S16)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	BREF 5.3130 IN.
(AB3S17)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	YMRP 2.5490 IN.
(AB3S18)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	ZMRP .0000 IN.
(AB3S19)	MSFC 570((A3IF)(S3/2)/(03)/(T9)/(S3/2))	-5.000	-500	.140	SCALE .0040

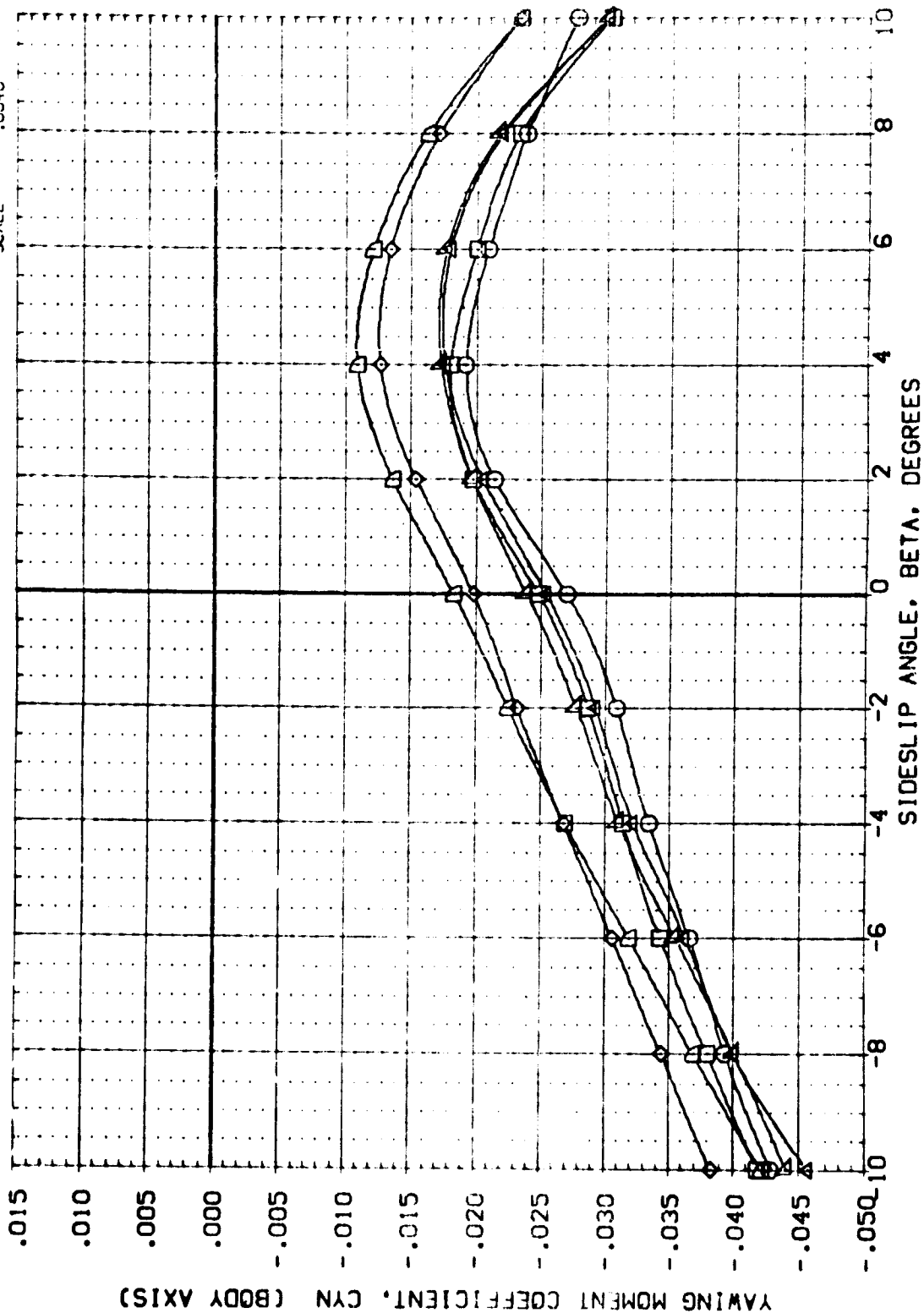


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(C)MACH = 1.24

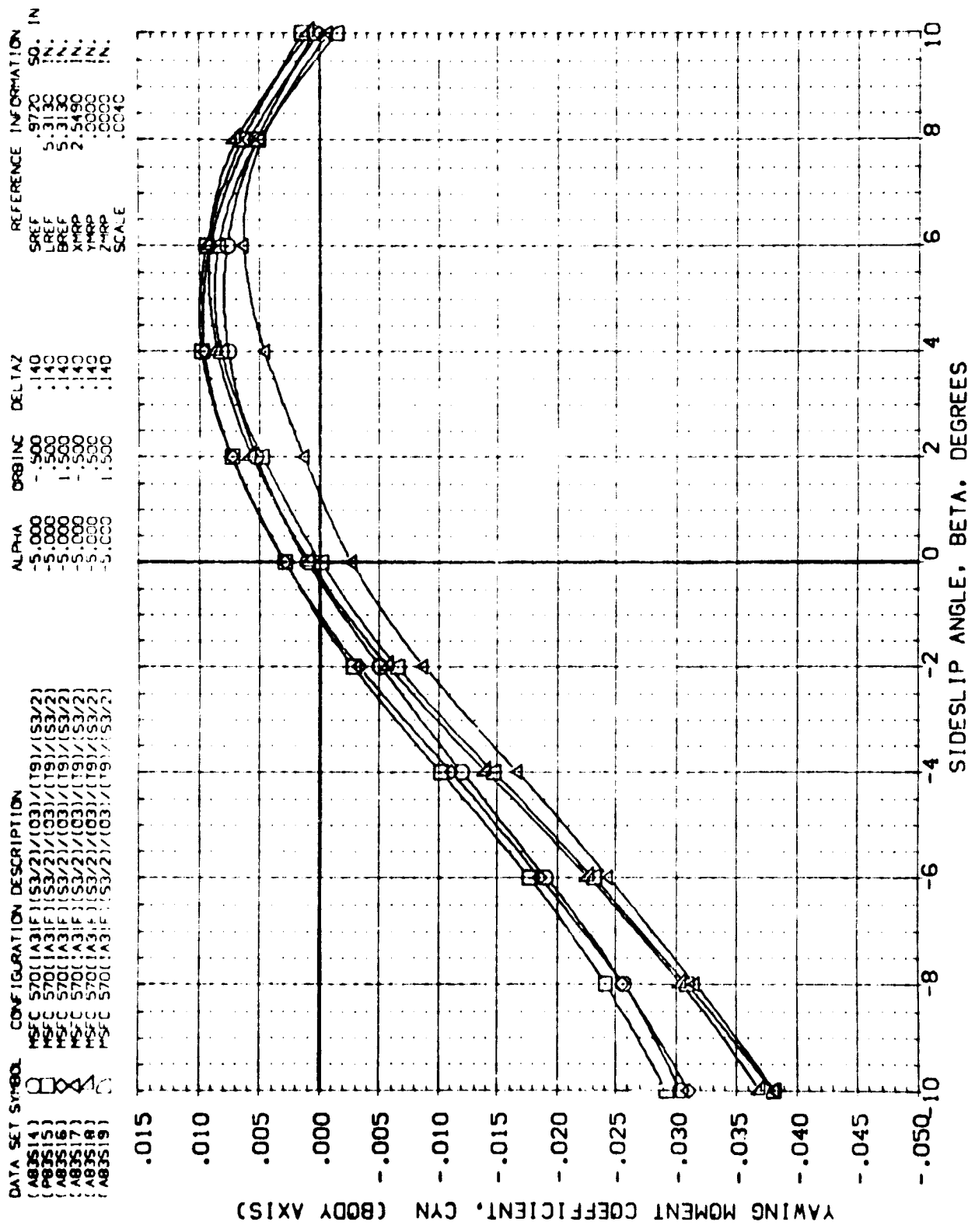
PAGE 373

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBINC	DELTA Z	REFERENCE INFORMATION
[A83514]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	-500	.140	SREF .9720 SQ. IN
[A83515]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN
[A83516]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	1500	.140	BREF 5.3130 IN
[A83517]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	-500	.140	XMRP 2.5480
[A83518]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	-500	.140	YMRP .0000
[A83519]	MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)	-5.000	1500	.140	ZMRP .0000
					SCALE .0040



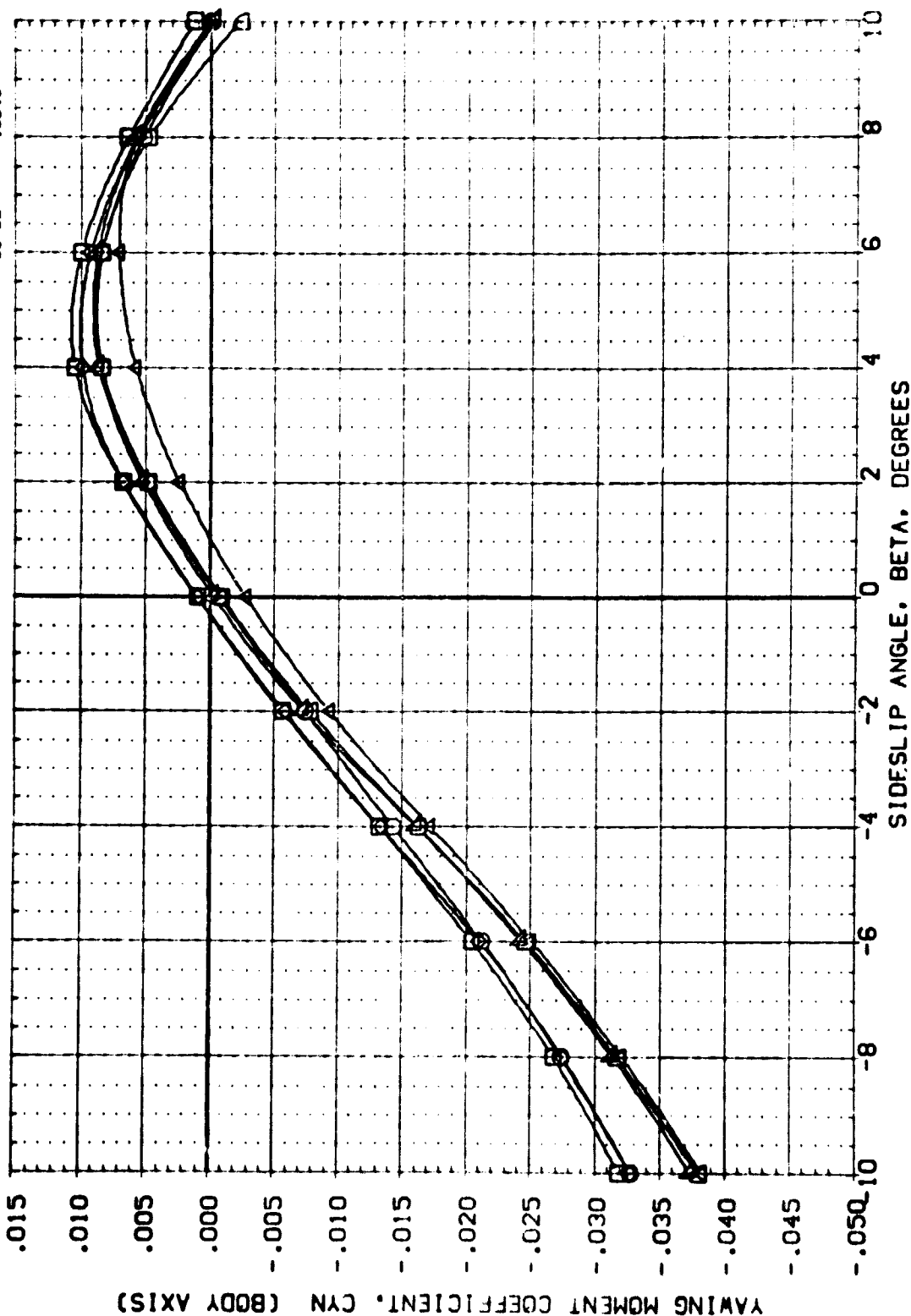
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(D)MACH = 1.47



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[A83S14]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	SREF .9720 SO. IN
[A83S15]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	LREF 5.3130 IN.
[A83S16]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	BREF 5.3130 IN.
[A83S17]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	YMRP 2.5490 IN.
[A83S18]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	ZMRP .0000 IN.
[A83S19]	MSFC 570(IASIF)(S3/2)(O3)/(T9)/(S3/2)	-5.000	-500	.140	SCALE .0040

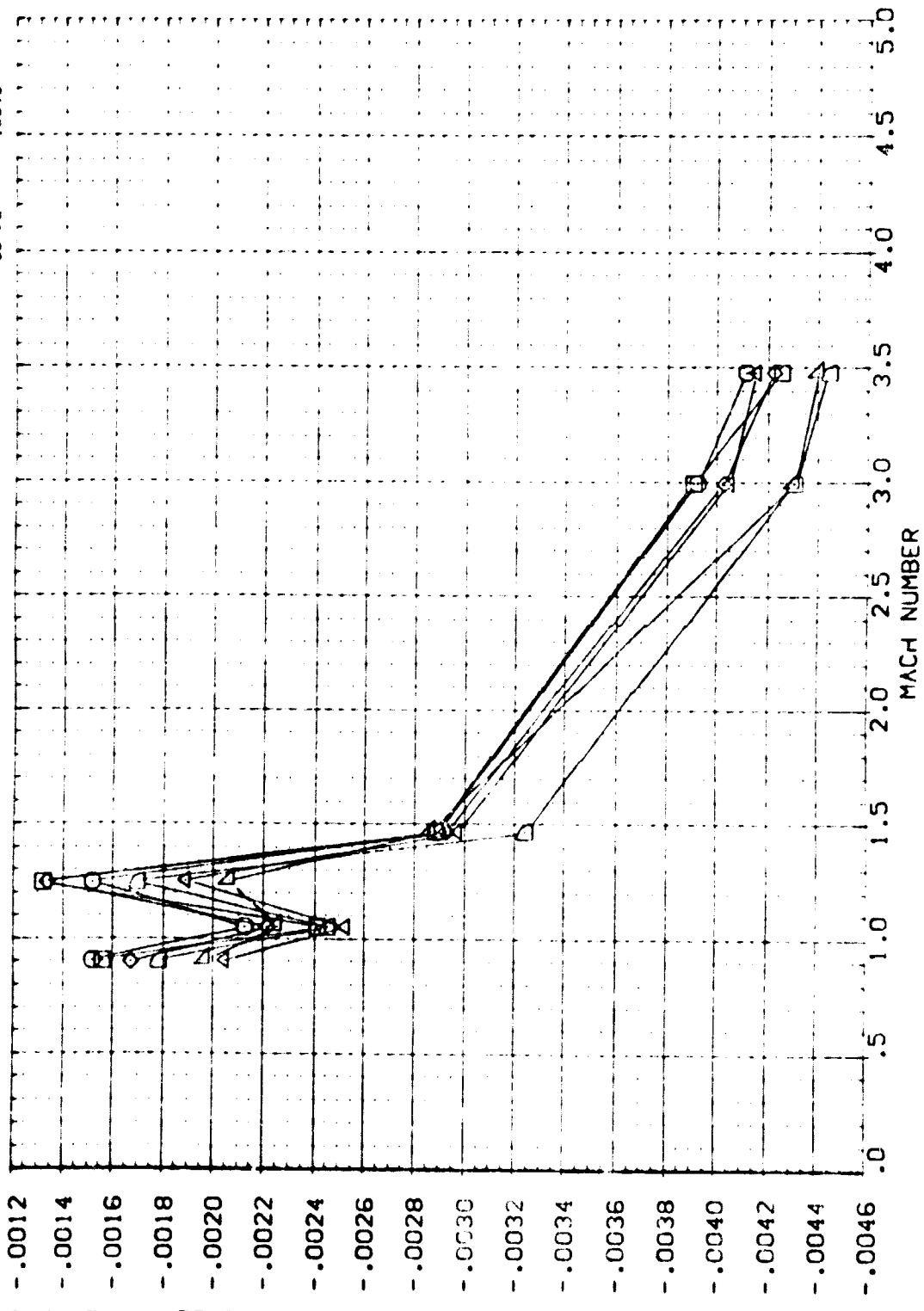


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

(F)MACH = 3.48

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
AB3S14	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	SREF .9720 SQ. IN
AB3S15	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	LREF 5.3130
AB3S16	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	BREF 5.3130
AB3S17	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	XREF 2.5490
AB3S18	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	YREF .0000
AB3S19	MSFC 570 (A31F) (S3/2) (O3) (T9) (S3/2)	-5.000	-500	.140	ZREF .0000
					SCALE .0040

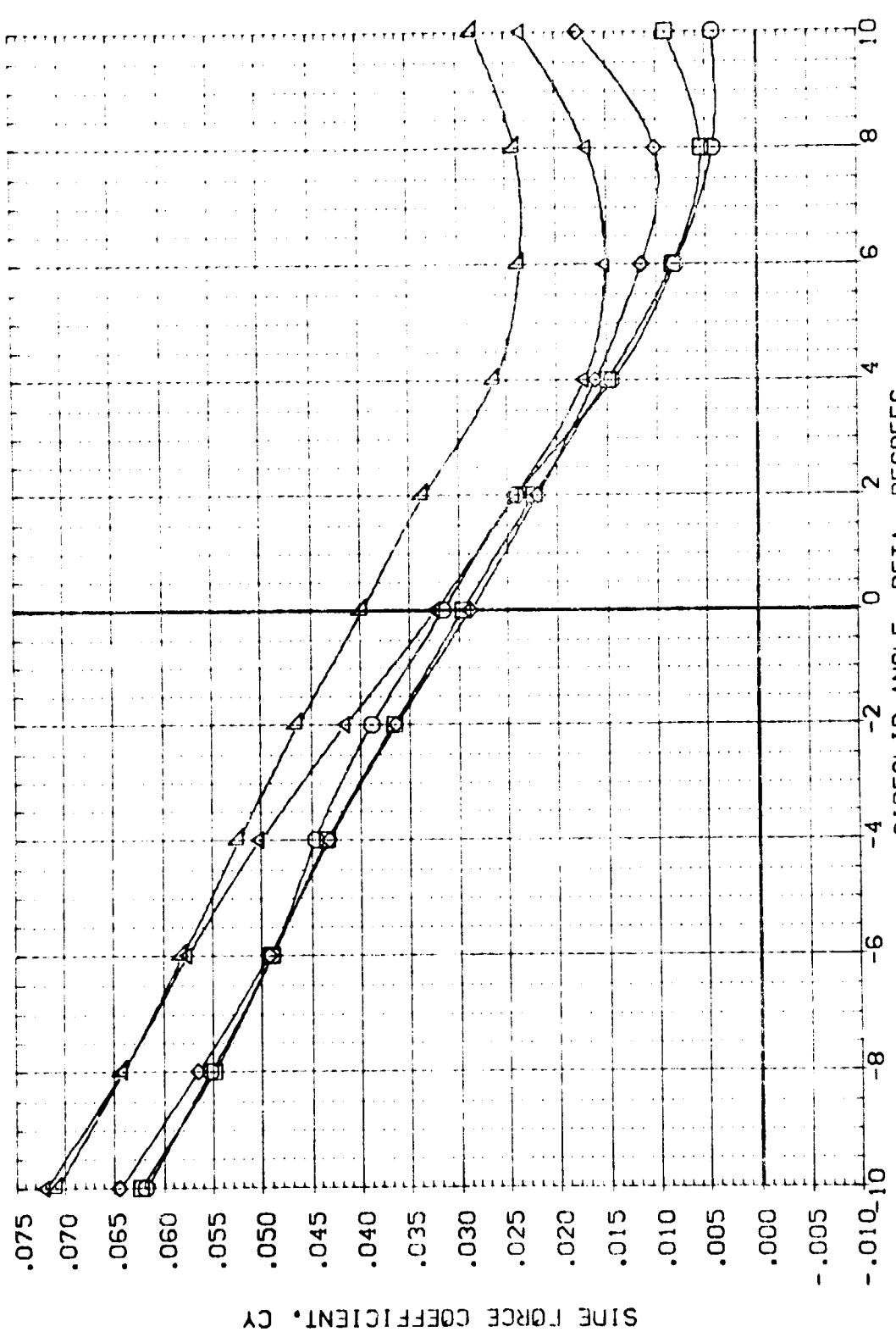


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

MSFC 570(1A31F)(S3/2)/(03)/(T9)/(S3/2)

(A83S07)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
□	.602	ALPHA .000 CONFIG 300.000	SREF .9720 SC. IN
◇	.799	DELTAZ .140 RLOOR .000	LREF 5.3130
△	.895	X-SRB .000 ORBINC .500	BREF 5.3130
	1.045	SPACER .000 SPADIA .000	X-PRP 2.5480
	1.246	SPAGAP .000	Y-PRP .0000
			Z-PRP .0000
			SCALE .0040

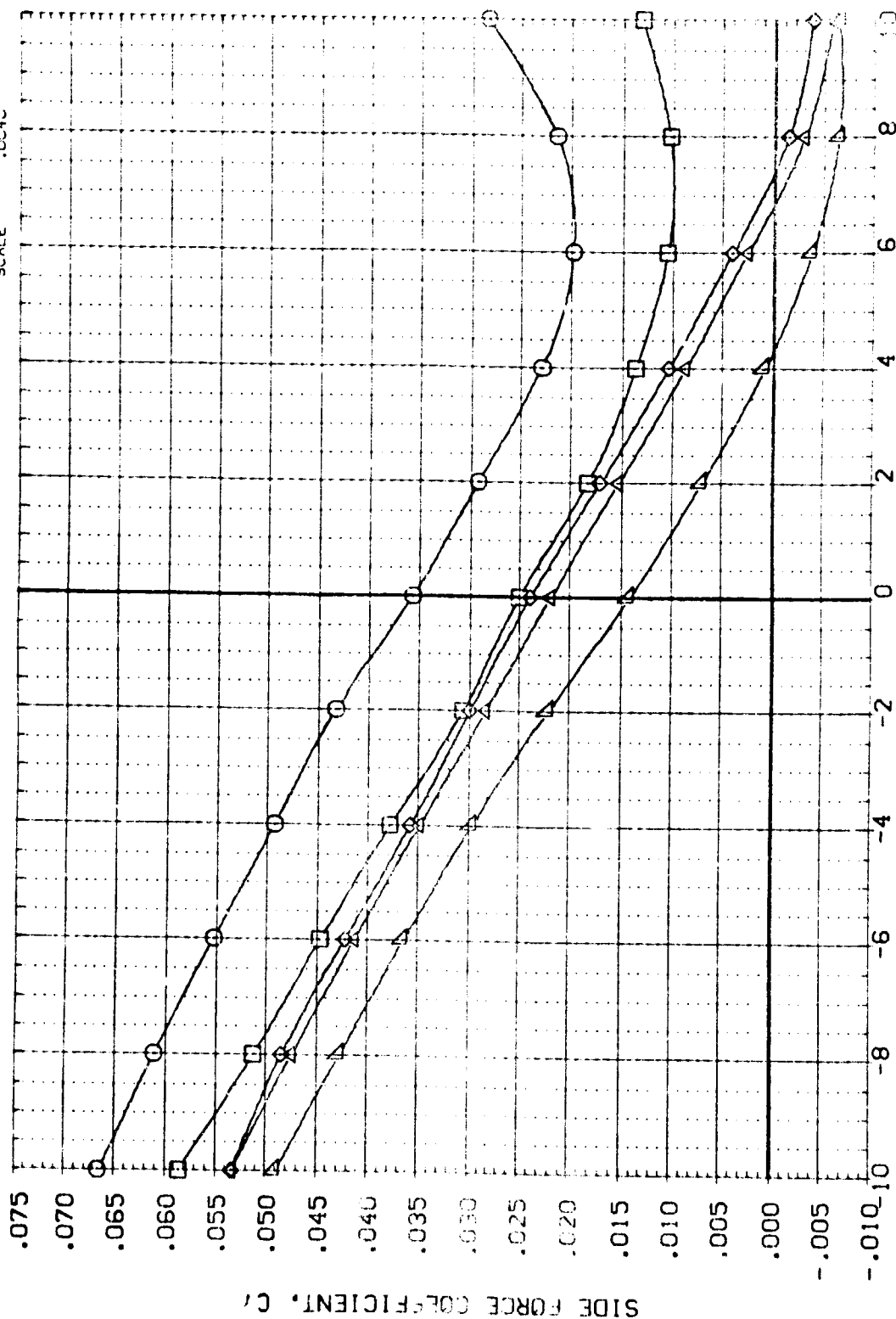


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)

(A83S07)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.465	ALPHA .000	SREF .9720
□	1.983	DELTAZ .140	LREF 5.3130
◇	2.990	X-SRB .000	BREF 5.3130
△	3.480	SPACER .000	XMRP 2.5490
	4.960	SPAGAP .000	ZMRP .0000
			SCALE .0040

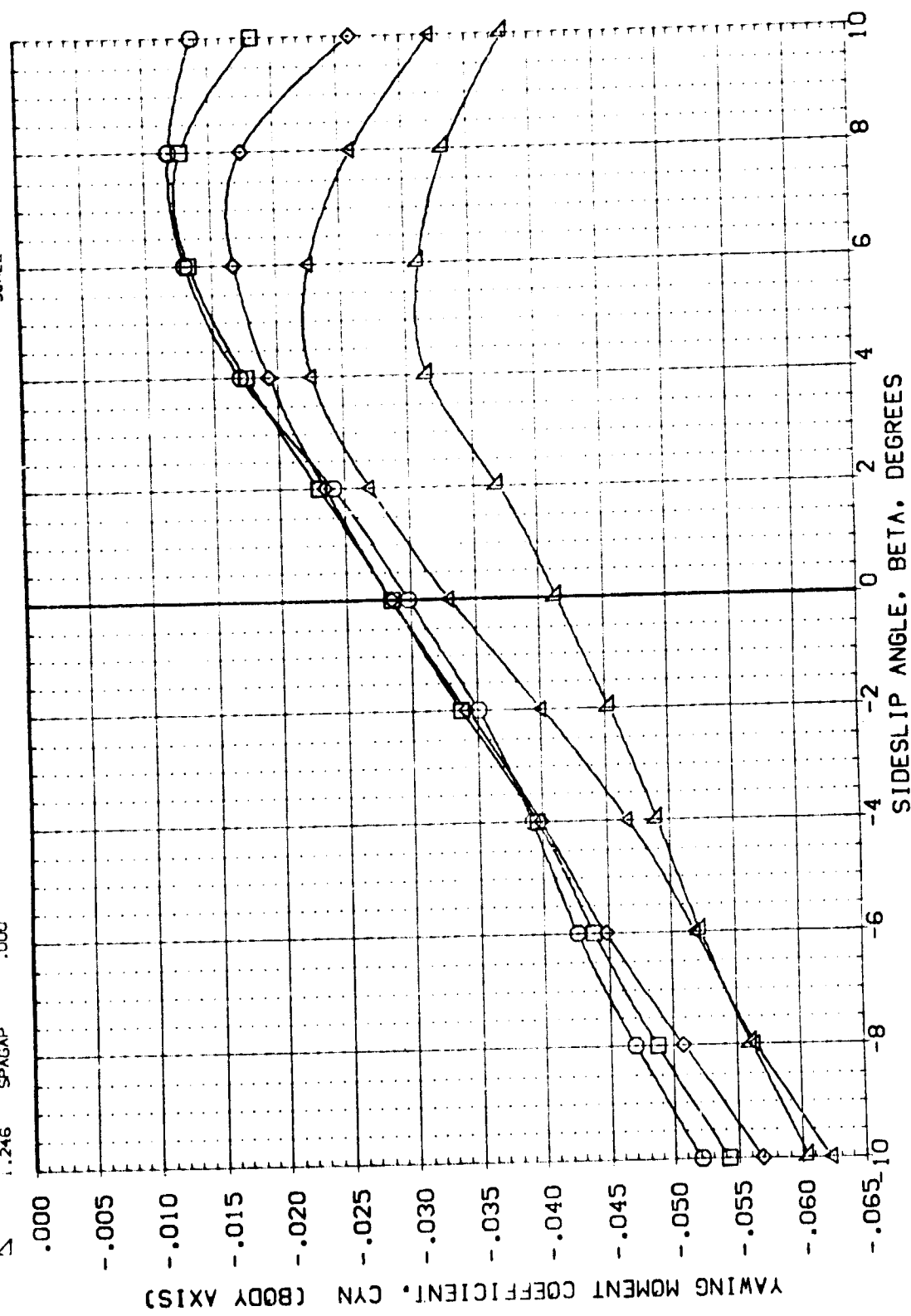


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A83507)

MSFC 570(1A31F)(S3/2)/(03)/(T9)/(S3/2)

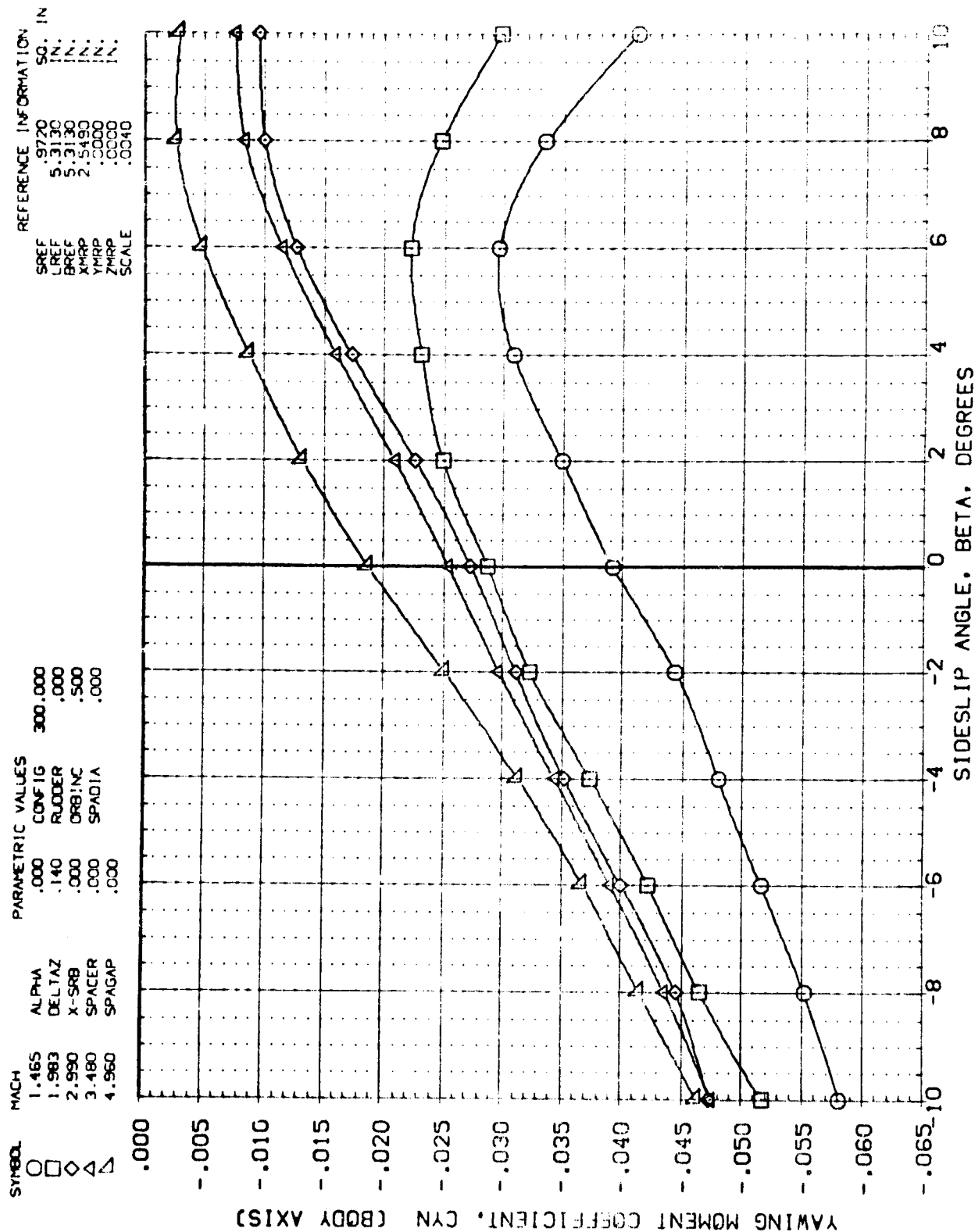
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION			
		ALPHA	CONF IG	300.000		SREF	SO. IN		
○	.602	DELTA Z	.000	.000		LREF	5.3130	N:	
□	.799	X-SRB	.140	.000		XRMP	5.3130	N:	
◇	.895	SPACER	.000	.500		YMRP	2.5490	N:	
△	1.045	SPADIA	.000	.000		ZMRP	.0000	N:	
	1.246	SPAGAP	.000	.000		SCALE	.0040	N:	



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(A83S07)

MSFC 570(1A31F)(S3/2)/(03)/(T9)/(S3/2)

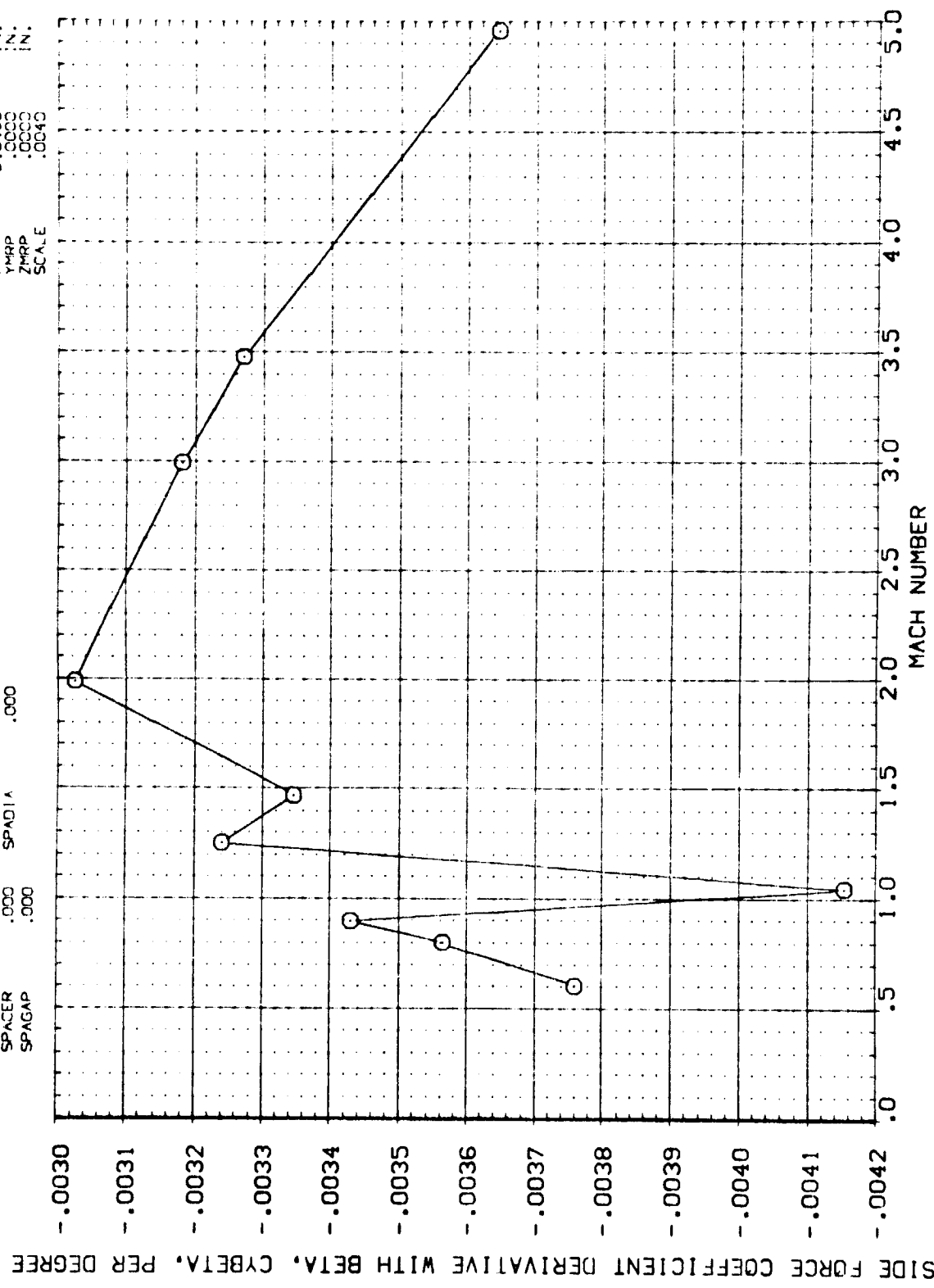


MSFC 570(1A31F)(S3/2)/(03)/(T9)/(S3/2)

(A83S07)

REFERENCE INFORMATION
 SREF .9720 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040

PARAMETRIC VALUES
 ALPHA .000 CONFIG 300.000
 DELTAZ .140 RUDDER .000
 X-SRB .000 ORBITING .500
 SPACER .000 SPADIA .000
 SPAGAP .000



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

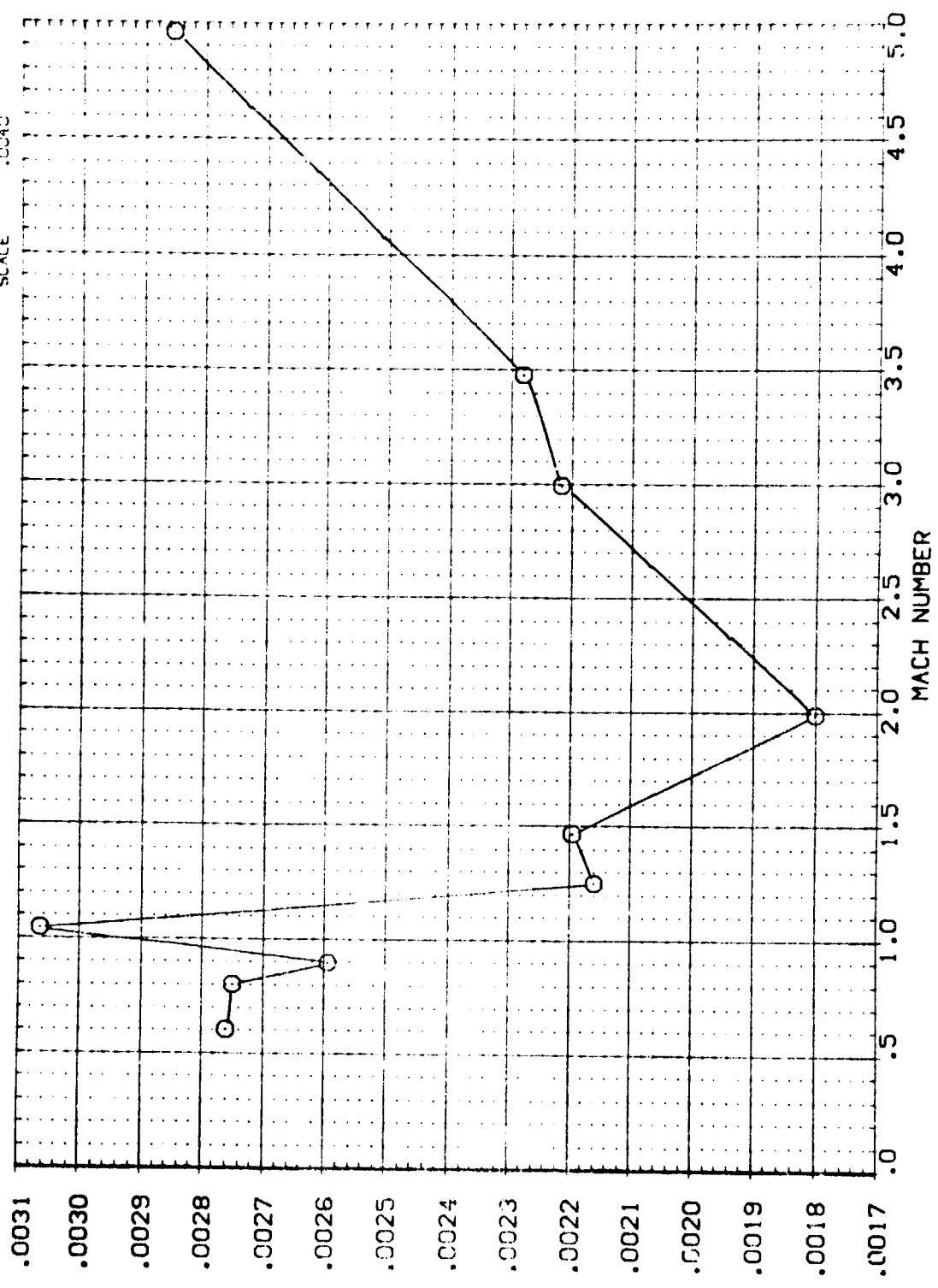
MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)

(A83S07)

PARAMETRIC VALUES
ALPHA .000
DELTAZ .140
X-SRB .000
SPACER .000
SPAGAP .000
CONF IG 300.000
RUDDER .000
ORBITALC .500
SPADIA .000

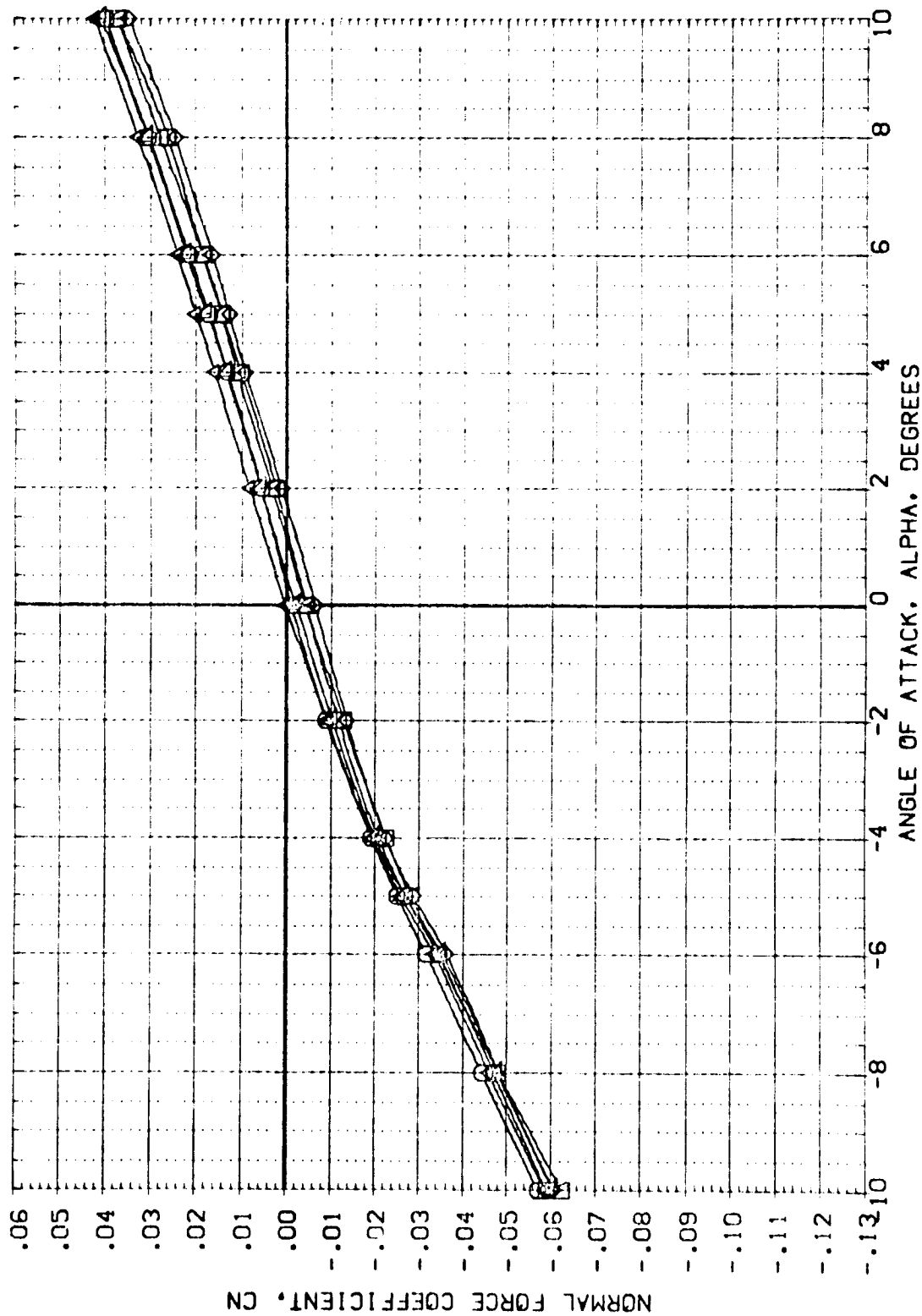
REFERENCE INFORMATION
SREF .9720
LREF 5.3130
BREF 5.3130
XMRP 2.5450
YMRP .0000
ZMRP .0000
SCALE .0340
SO. IN

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STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

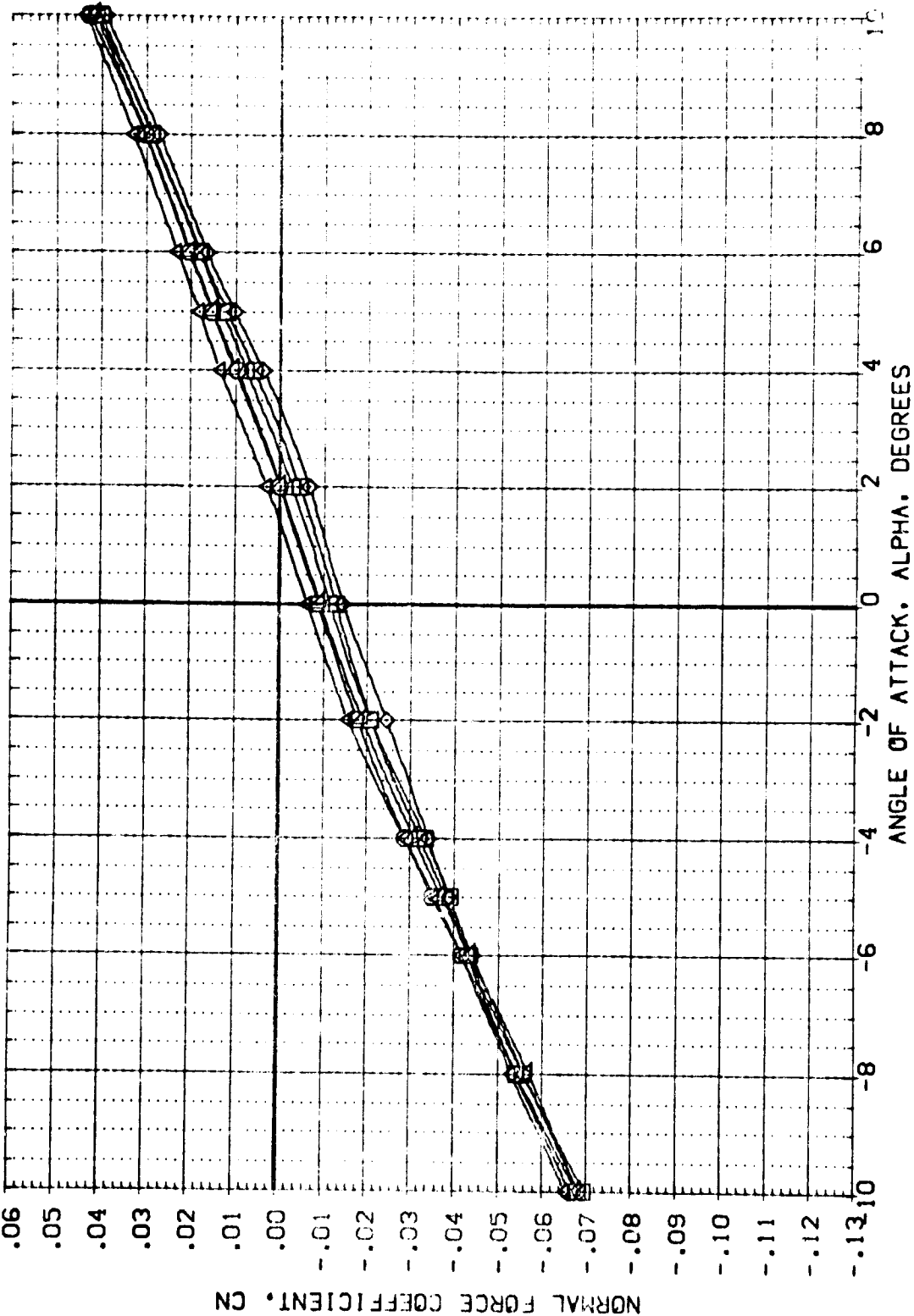
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	-.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	1.500	.140	BREF 5.3130
(C83523)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	-.500	.280	XMRP 2.5490
(C83524)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.280	YMRP .0000
(C83525)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	1.500	.280	ZMRP .0000
					SCALE .0000



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(A)MACH = .60

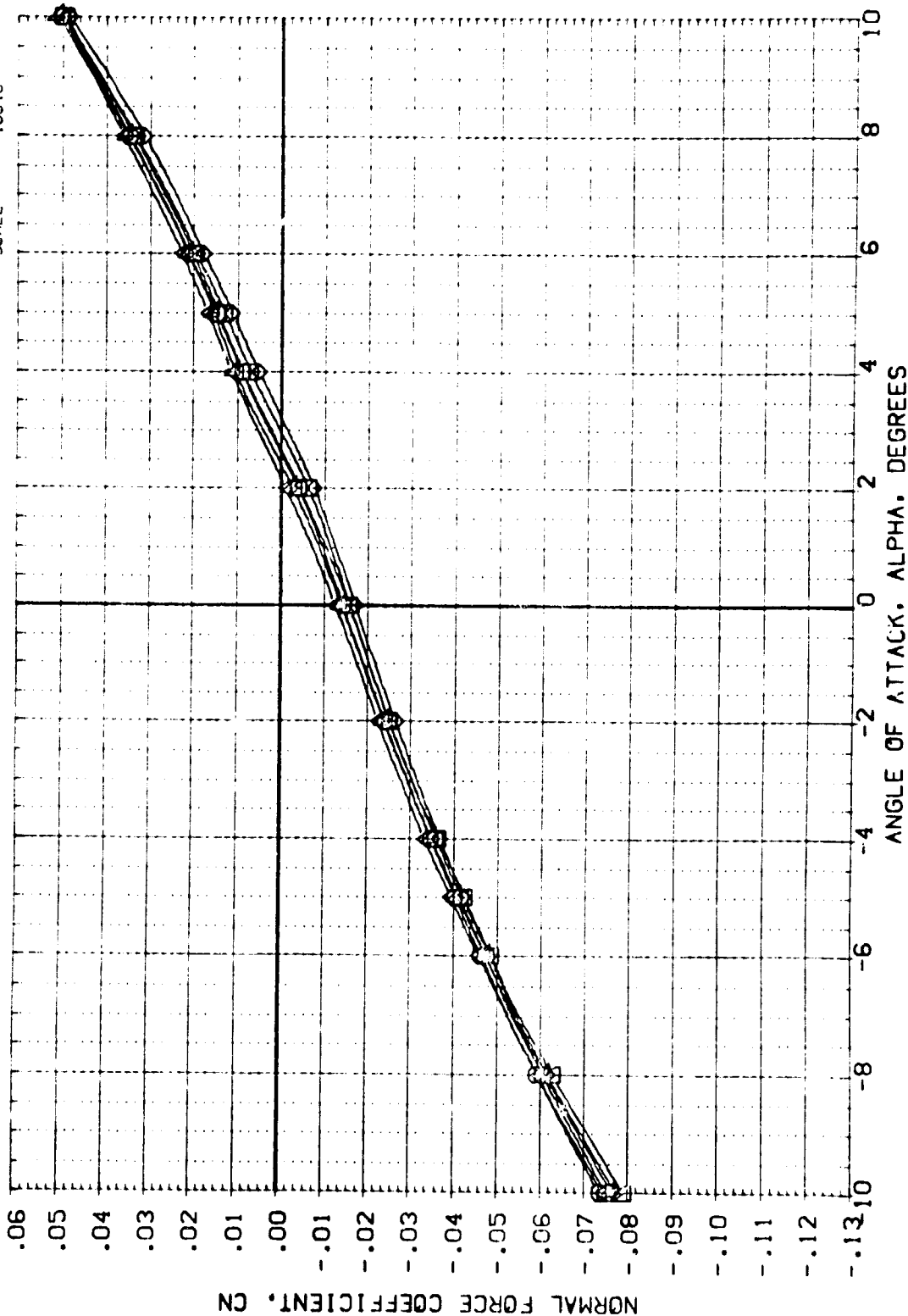
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83S20)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.140	SREF .9720 SC. IN
(C83S21)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
(C83S22)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83S23)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83S24)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.280	YMRP .0000 IN.
(C83S25)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(B)MACH = .90

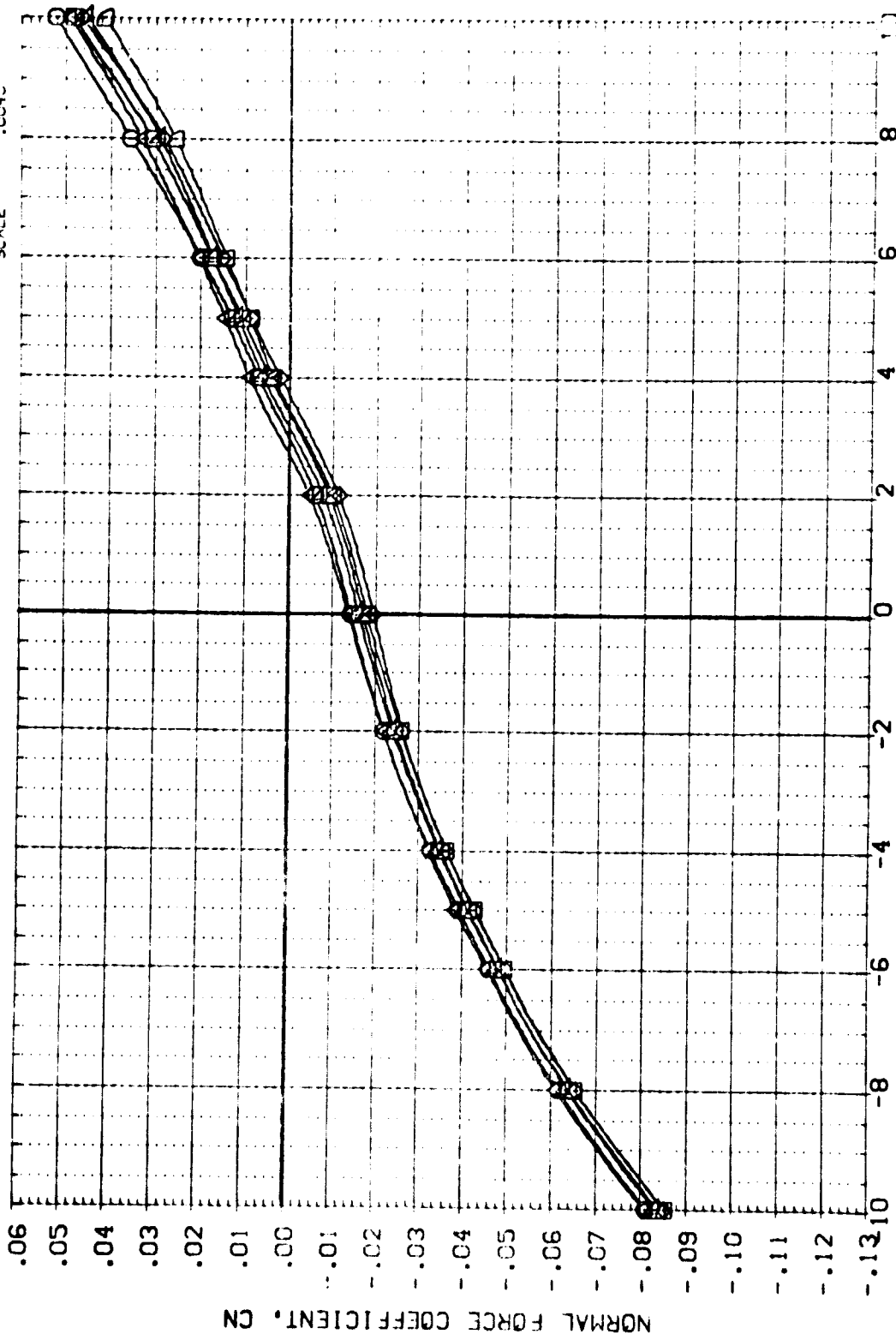
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83S20)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83S21)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.140	LREF 5.3130
(C83S22)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.140	BREF 5.3130
(C83S23)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83S24)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.280	YMRP .0000
(C83S25)	MSFC 570((A3)F)((S3/2)/((C3)/((T9)(U5)))/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

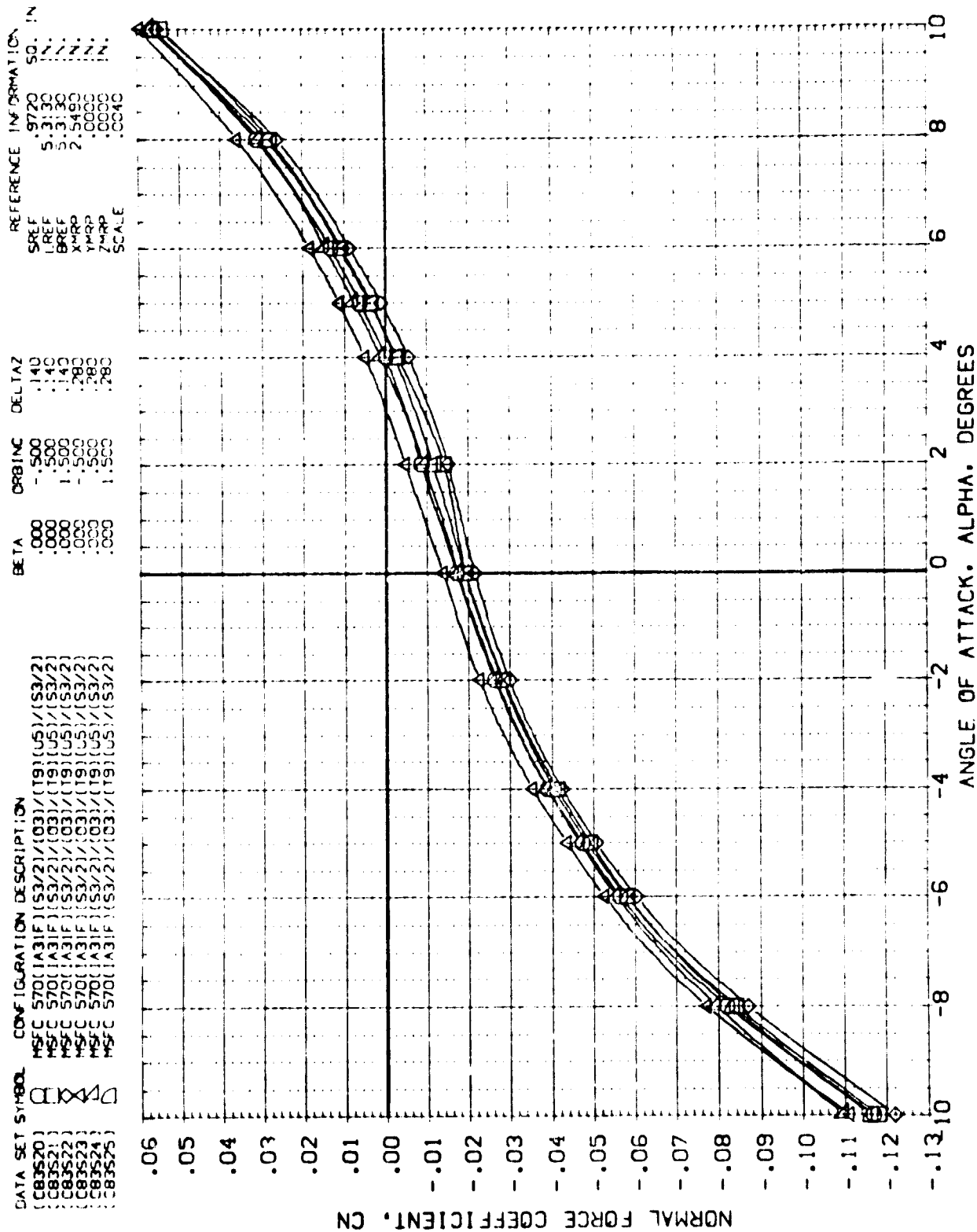
(C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBIT INC	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.140	BREF 5.3130
(C83523)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83524)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.280	YMRP .0000
(C83525)	MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

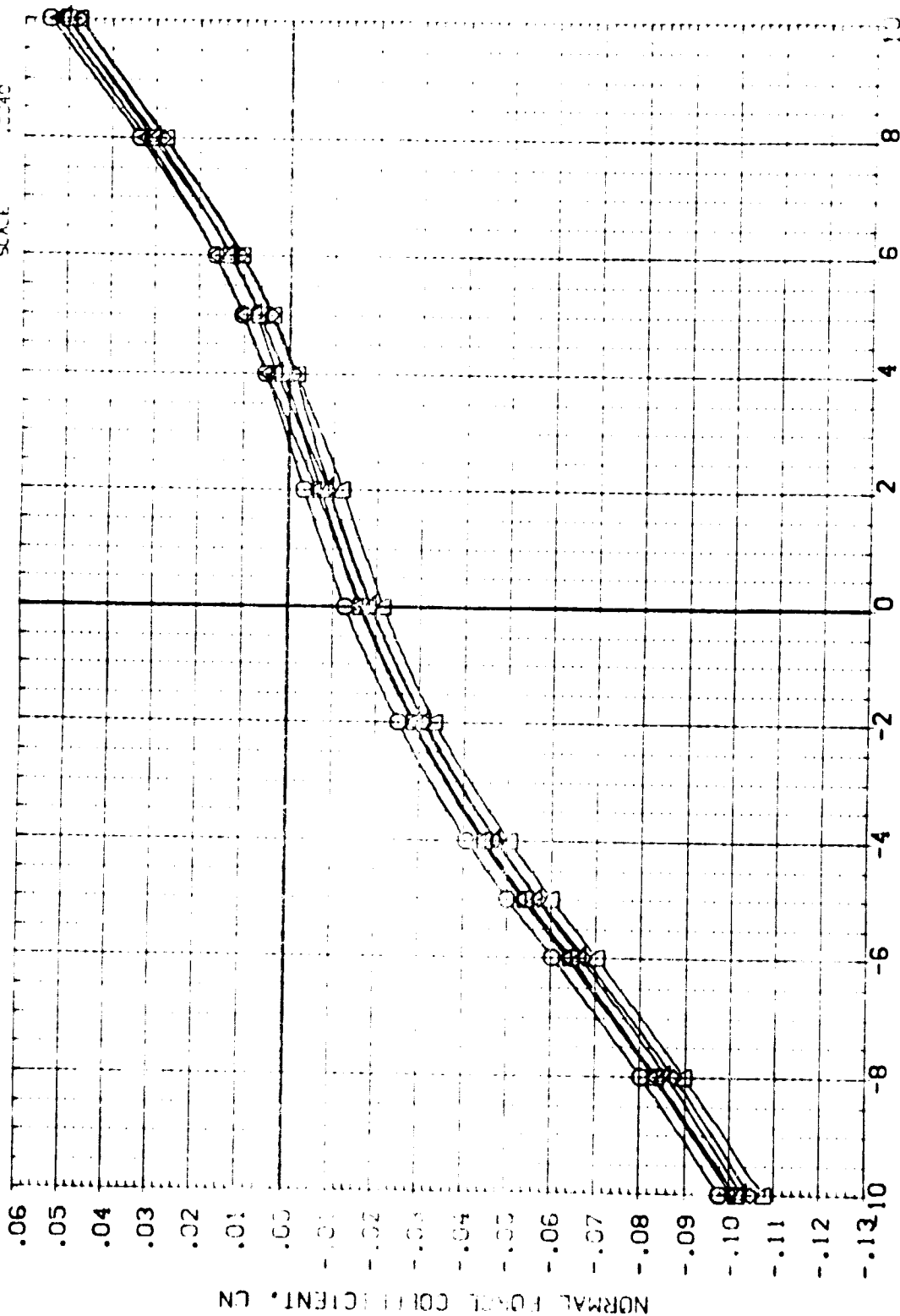
(D)MACH = 1.25



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)(U5)/(S3/2)

(MACH = 1.97

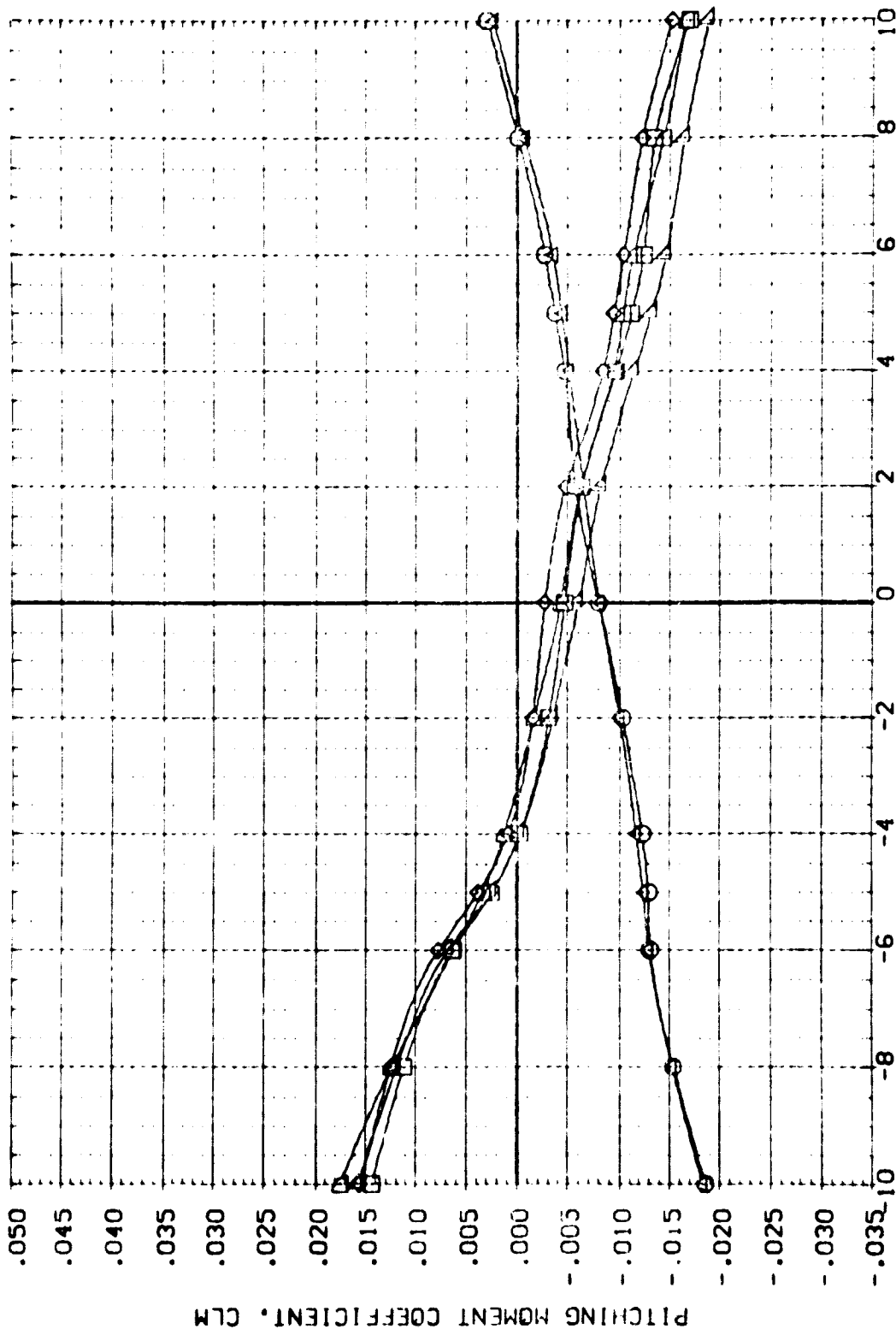
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.140	SREF 9730
(C83521)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.140	REF 53130
(C83522)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.140	REF 53130
(C83523)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.280	REF 53130
(C83524)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.280	REF 53130
(C83525)	MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2))	.000	.500	.280	REF 53130
					SCALE



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(MACH = 3.48

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
[C83520]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	SREF .9720 SO. IN
[C83521]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	LREF 5.3130 IN.
[C83522]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	BREF 5.3130 IN.
[C83523]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	XMPP 2.5490 IN.
[C83524]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	YMPP .0000 IN.
[C83525]	MSFC 570(A31F)(S3/2)(T9)(U5)/(S3/2)	.000	-.500	.140	ZMPP .0000 IN.
					SCALE .0040

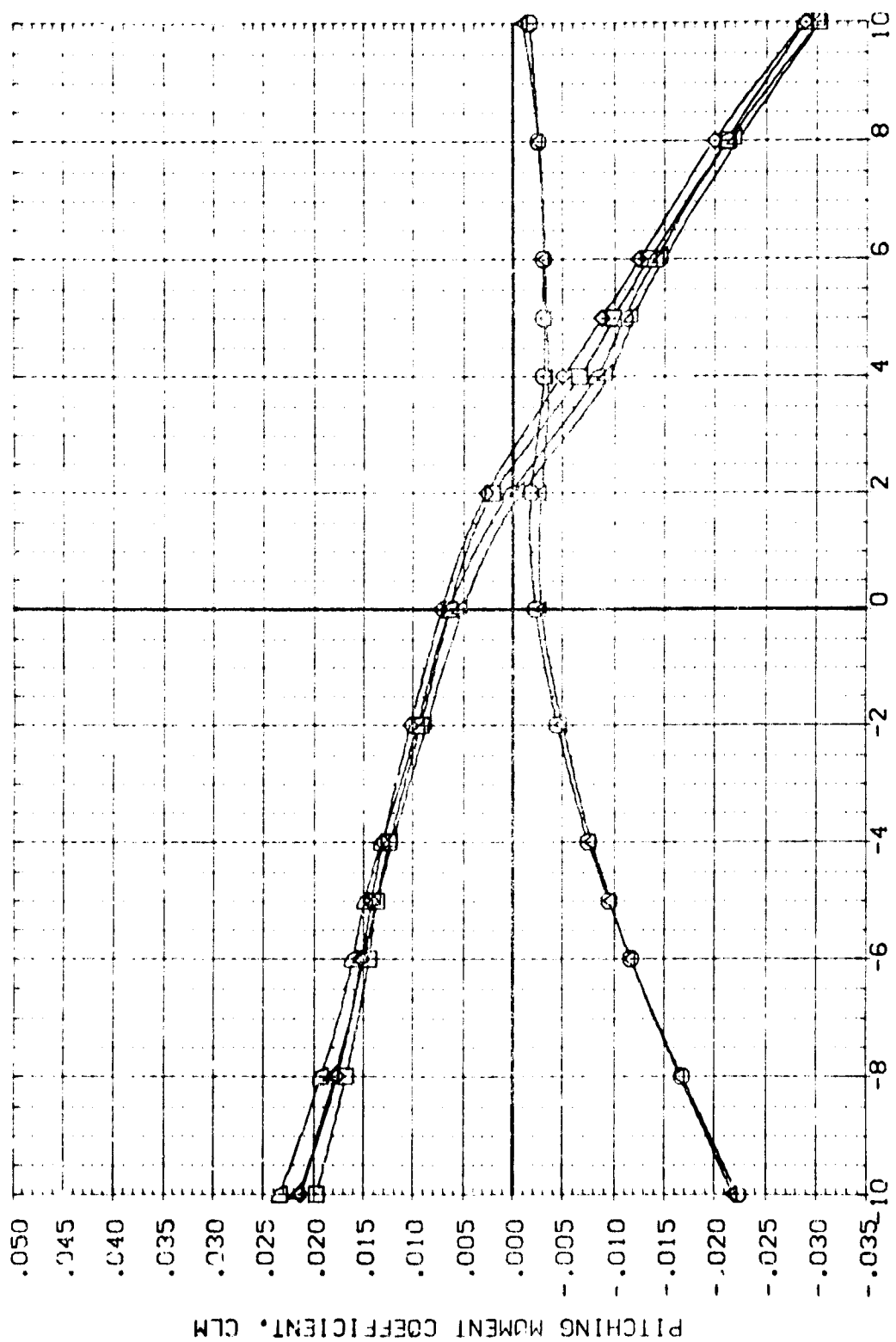


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(M)MACH = .60

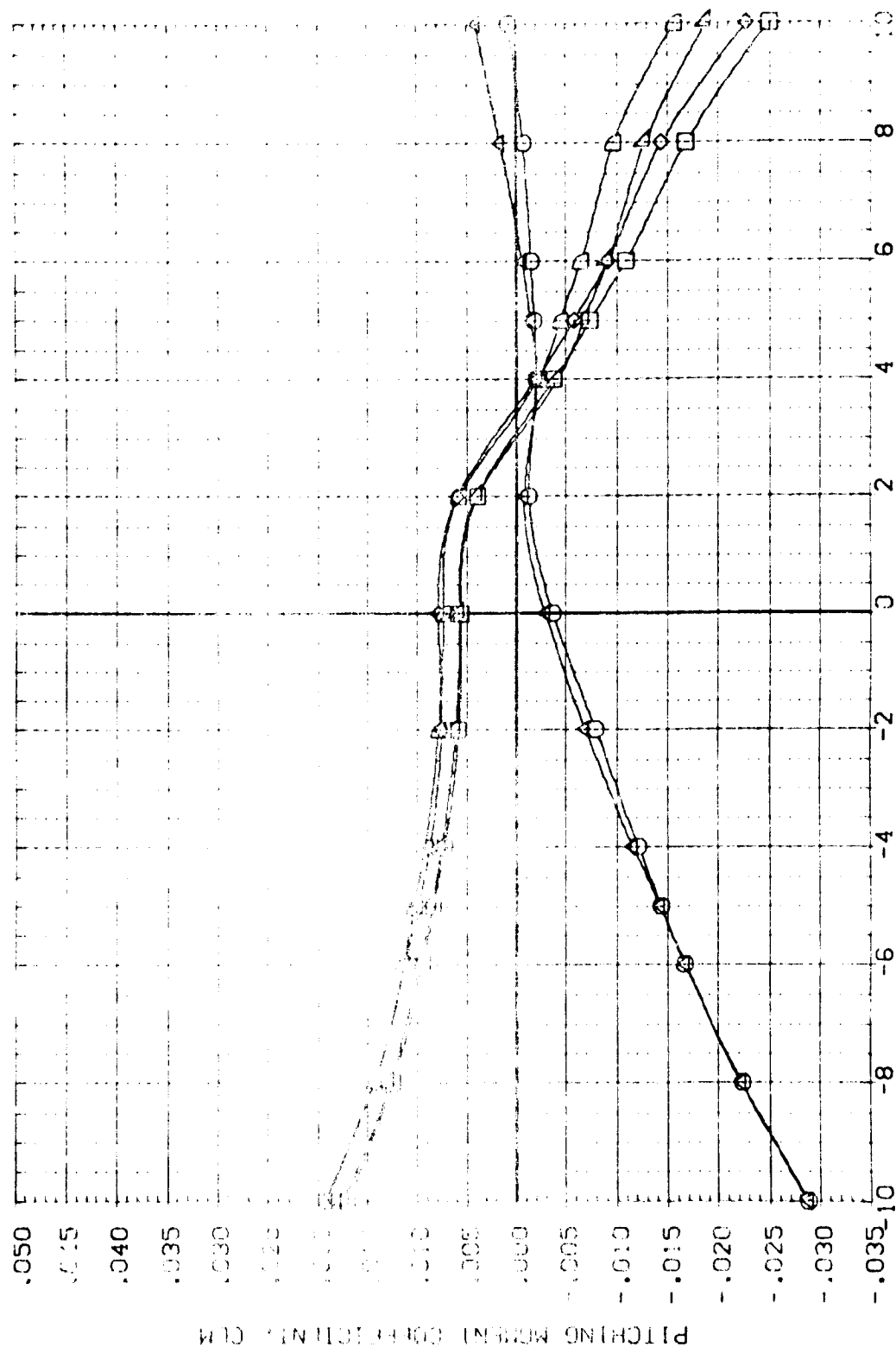
PAGE 39:

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PROBING	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.140	SREF .9720 SO. IN
(C83521)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.140	LREF 5.3130
(C83522)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.140	BREF 5.3130
(C83523)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.280	XMRP 2.3490
(C83524)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.280	YMRP .0000
(C83525)	MSFC 573 (A31F) (S3/2) (03) (19) (U5) (S3/2)	.000	-.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)
 (C)MACH = 1.05

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	CRBINC	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.140	SREF .9720
(C83521)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.140	UREF 5.3130
(C83522)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.140	XREF 5.3130
(C83523)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.280	YREF 2.5430
(C83524)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.280	ZREF 2.5430
(C83525)	MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)	.000	-.500	.280	SCALE .0000

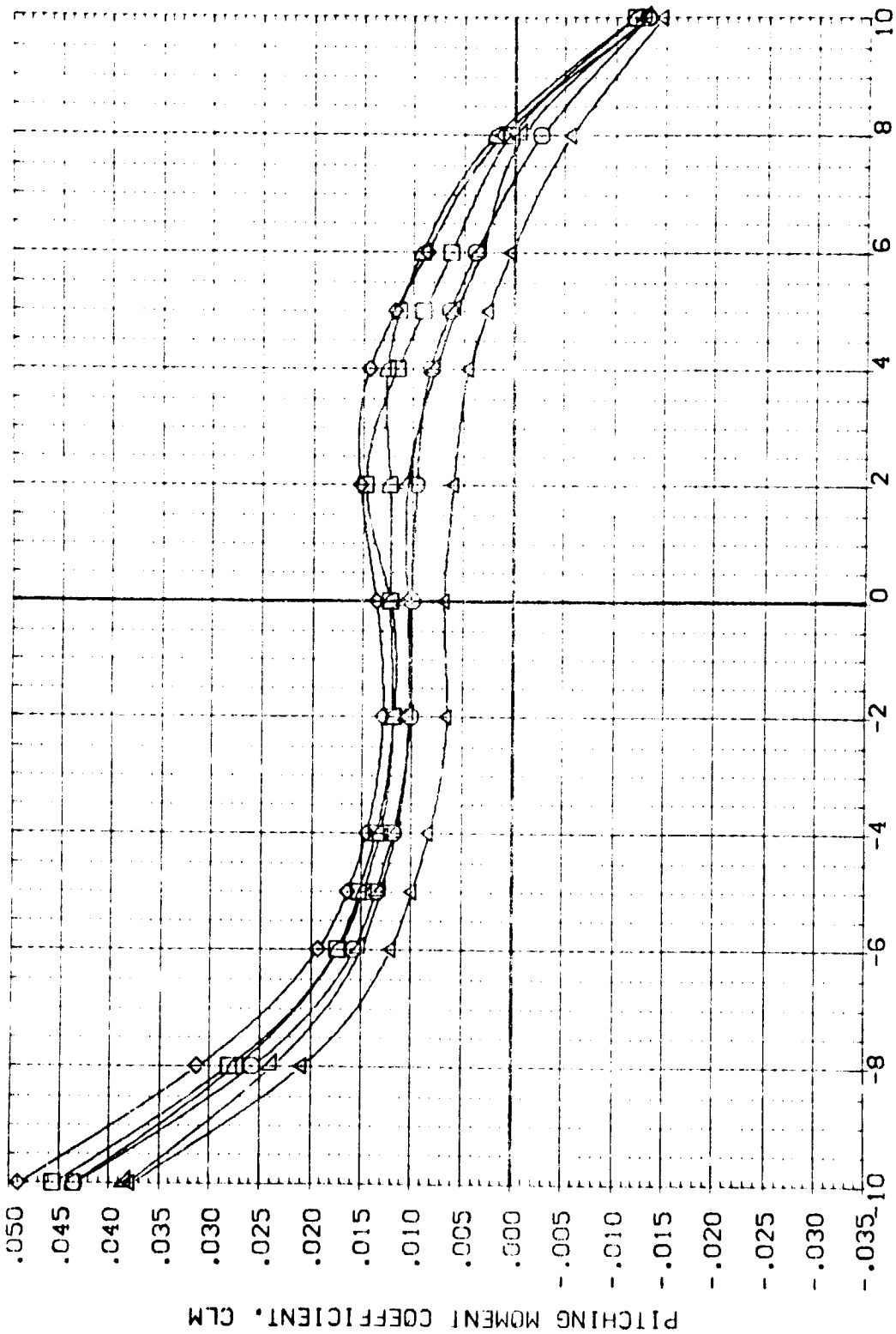


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(00)MACH = 1.25

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.140	SREF .9720 SO .14
(C83521)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.140	BREF 5.3130
(C83523)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.280	XMRP 2.5450
(C83524)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.280	YMRP .0000
(C83525)	MSFC 570((A31F)(S3/2)(T9)(U5))((S3/2))	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

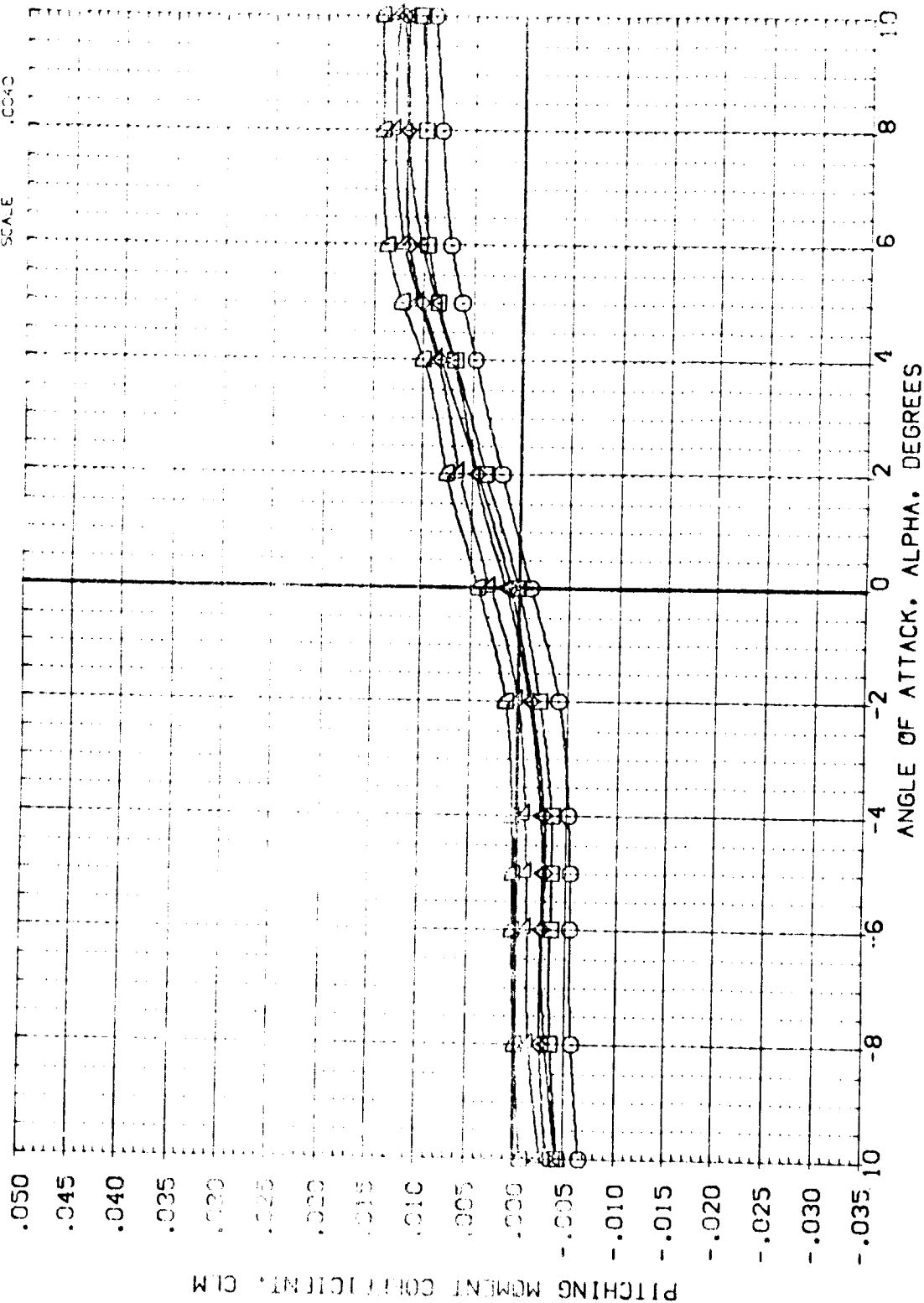
(M)₀ = 1.97

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[C83S20] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])
 [C83S21] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])
 [C83S22] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])
 [C83S23] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])
 [C83S24] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])
 [C83S25] MSFC 570([A3IF])(S3/2)/([03])(T9)(U5)/([S3/2])

BETA .000
 ORBITING .500
 DELTA Z .140
 .500
 .140
 .140
 .280
 .500
 .280
 .500

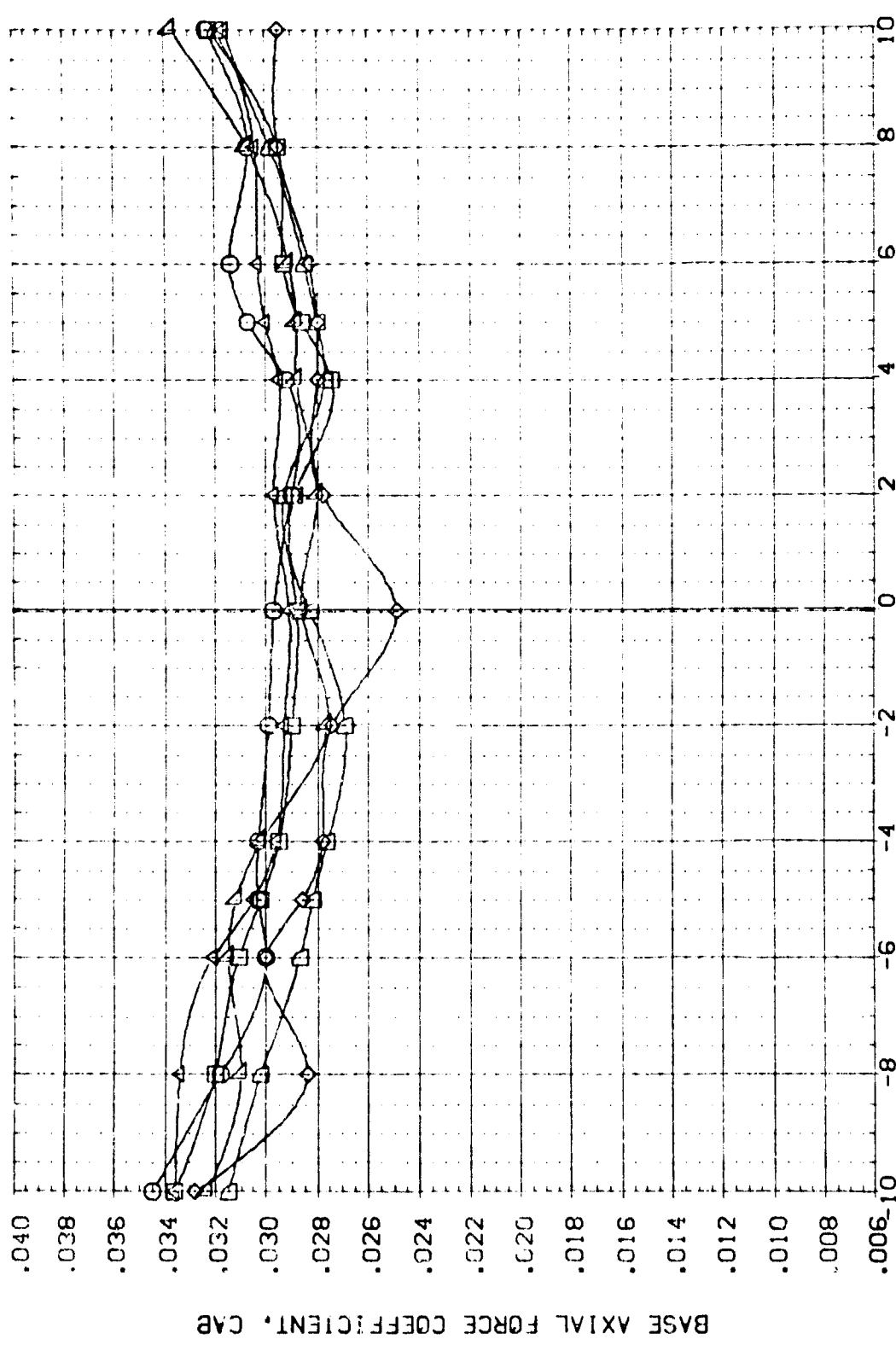
REFERENCE INFORMATION
 SREF 9720 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XREF 2.5496
 YREF .0000
 ZREF .0000
 SCALE .0040



STABILITY CHARACTERISTICS - LEFT SR3 (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(C)MACH = 3.48

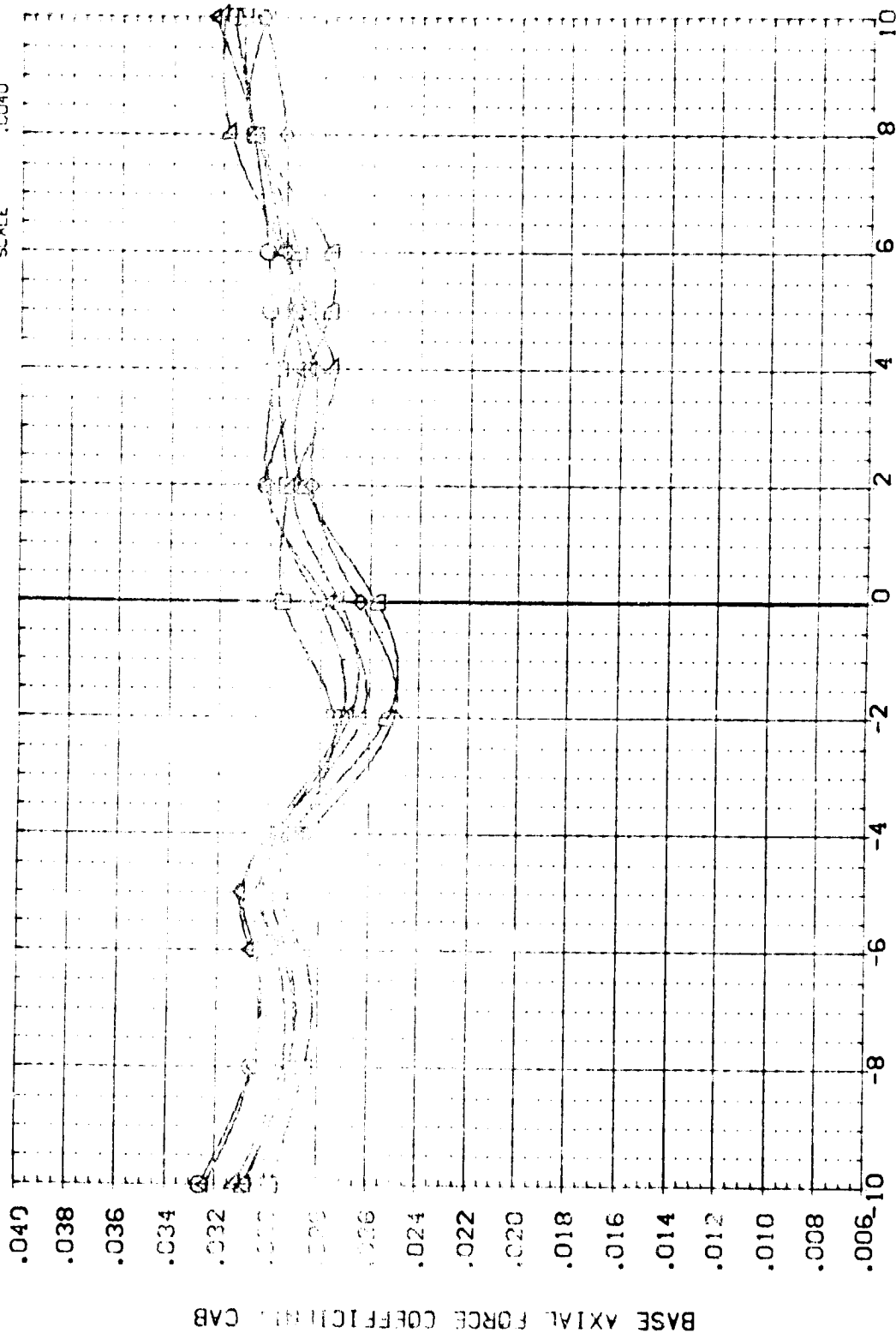
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83523)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.280	XMRP 2.5490
(C83524)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.280	YMRP .0000
(C83525)	MSFC 570(A3)F(S3/2)/(C3)/(T9)(U5)/(S3/2)	.000	.500	.280	ZMRP .0000
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (C3)/(T9)(U5)/(S3/2)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.140	LREF 5.3130 IN
(C83522)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.140	BREF 5.3130 IN
(C83523)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.280	XMRP 2.5450 IN
(C83524)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.280	YMRP .0000 IN
(C83525)	MSFC 570 (A31F) (S3/2) (T9) (U5) (S3/2)	.000	-.500	.280	ZMRP .0000 IN
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(B) MACH = .90

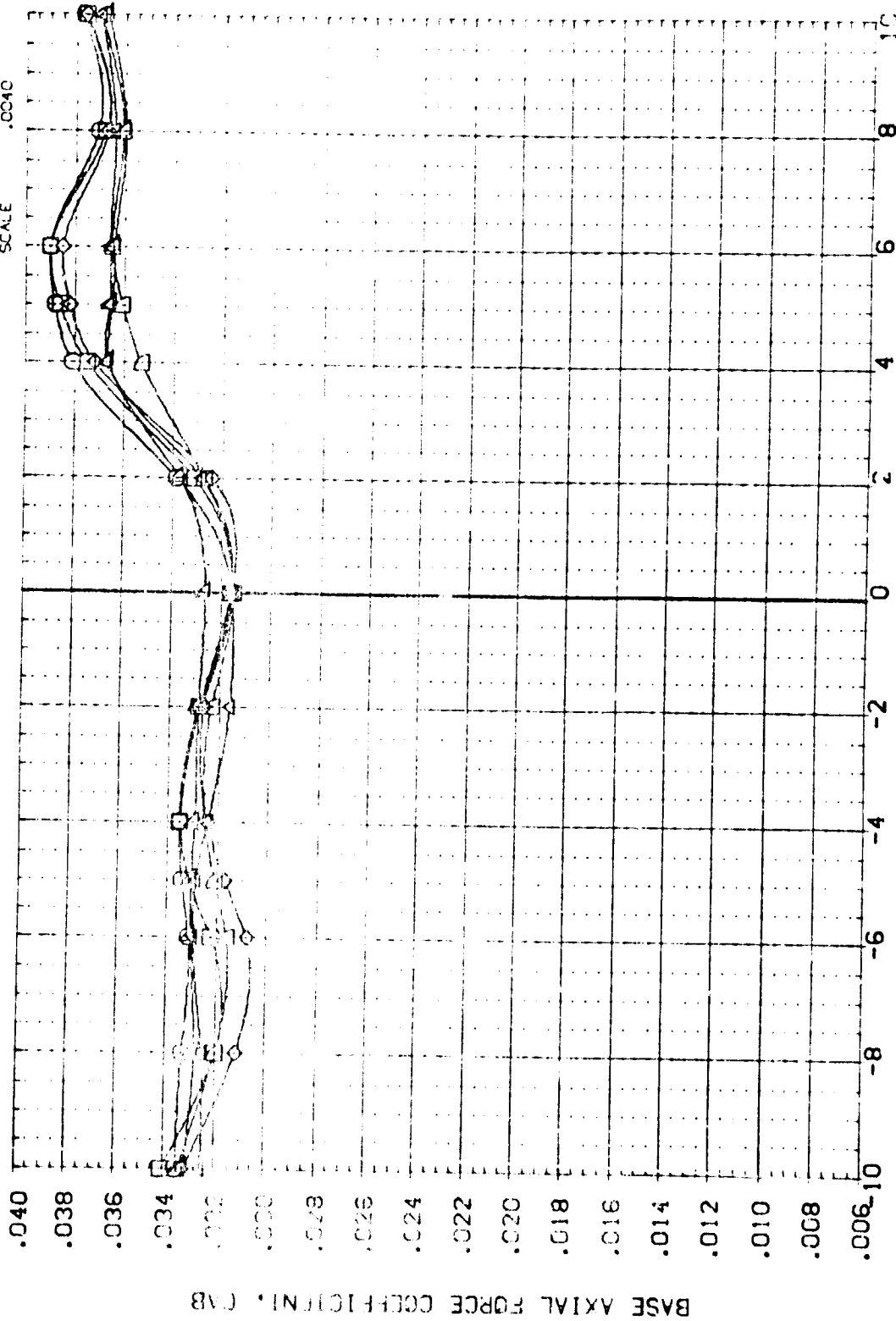
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83520) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)
 (C83521) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)
 (C83522) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)
 (C83523) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)
 (C83524) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)
 (C83525) MSFC 570(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)

BETA .000
 .000
 .000
 .000
 .000
 .000

ORBITAL C DELTA Z
 .500
 .500
 .500
 .500
 .500
 .500

REFERENCE INFORMATION
 SREF .9720 SO. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



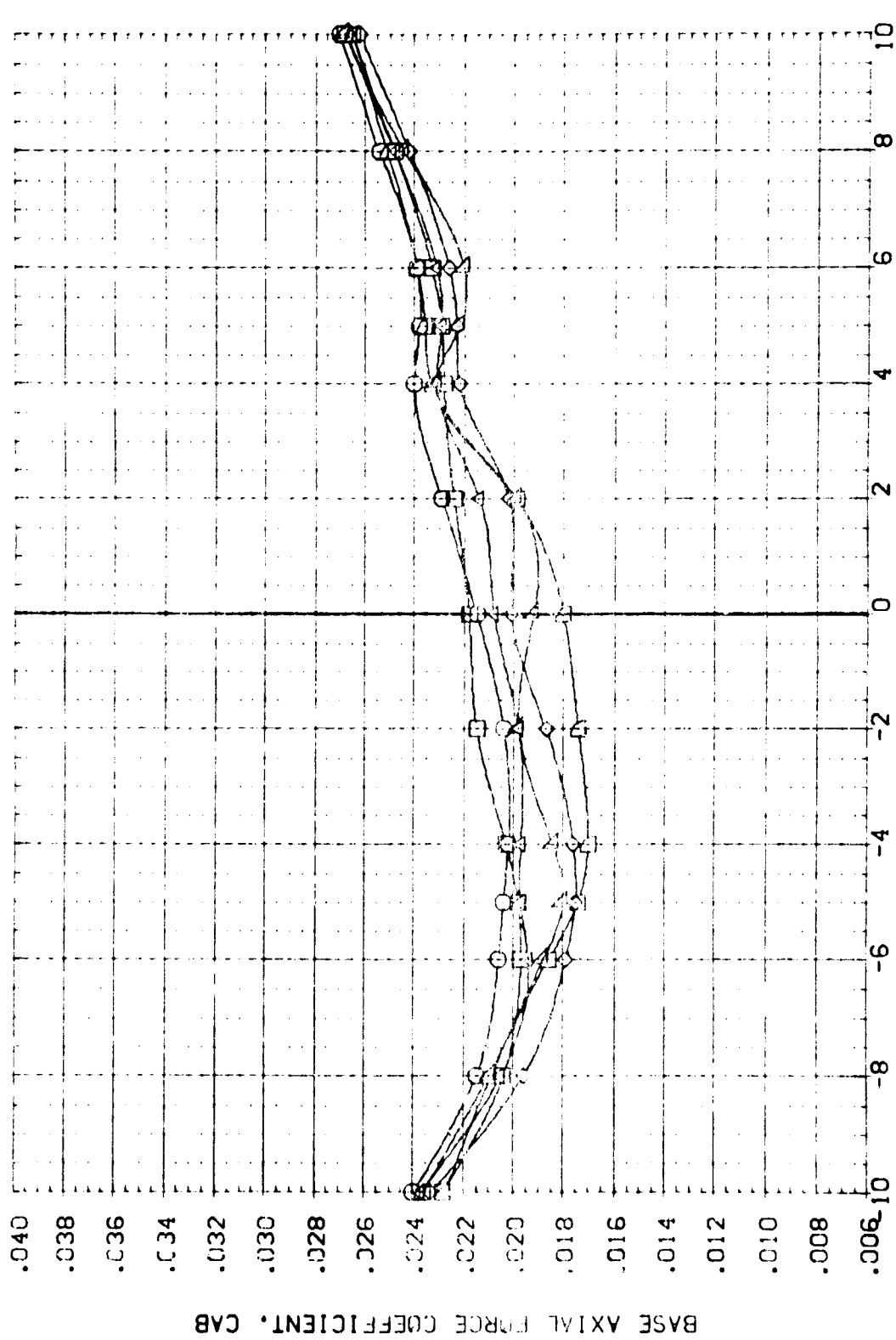
ANGLE OF ATTACK, ALPHA, DEGREES

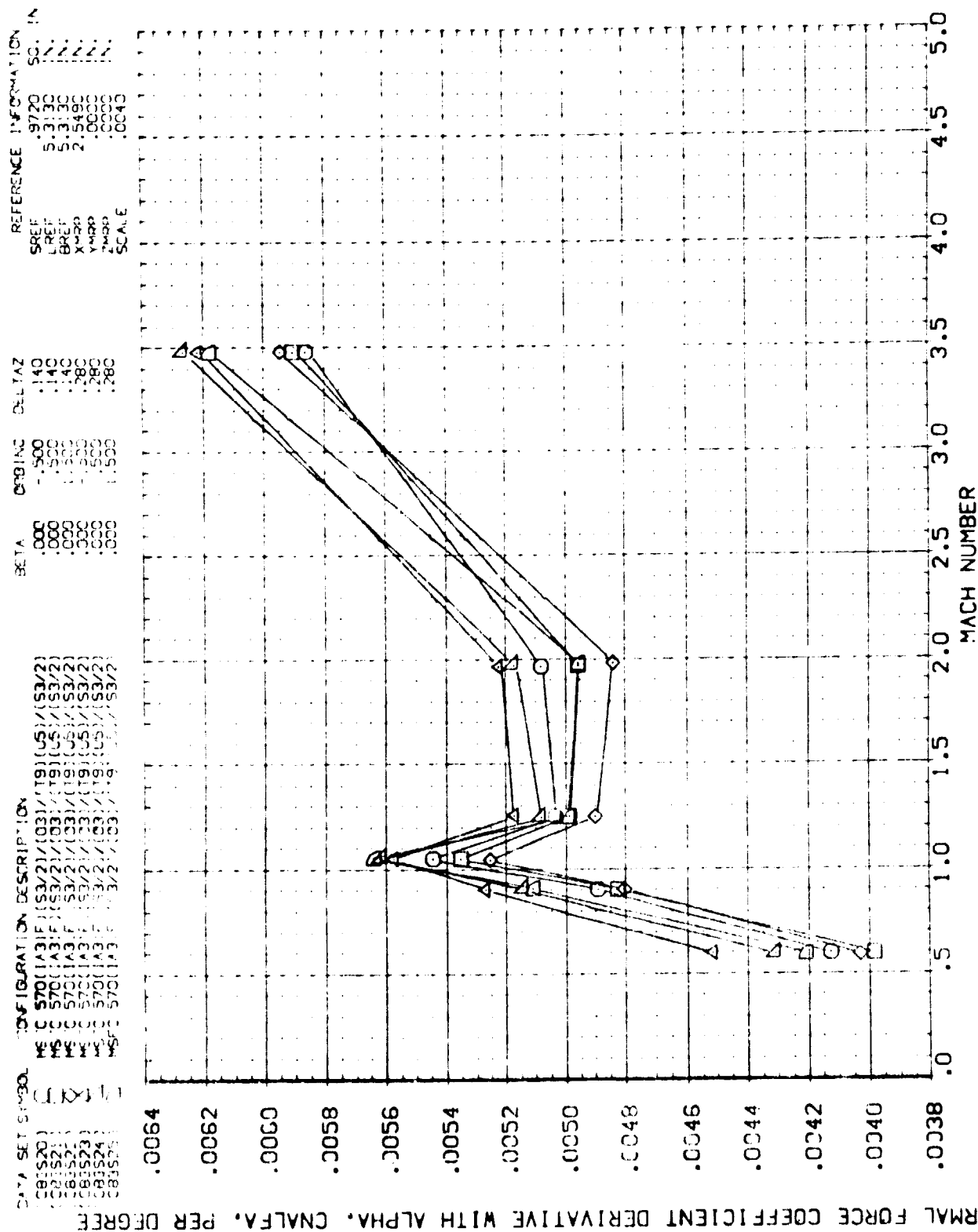
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(03)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ORBITAL DELTA Z REFERENCE INFORMATION

(C83520)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.140	SREF .9720	SO: 1
(C83521)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130	12
(C83522)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.140	BREF 5.3130	12
(C83523)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.220	XMRP 2.5480	12
(C83524)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.220	YMRP .0000	12
(C83525)	MSFC 570(IA3IF)(S3/2)(T9)(U5)/(S3/2)	.000	.500	.280	ZMRP .0000	12
					SCALE .0010	

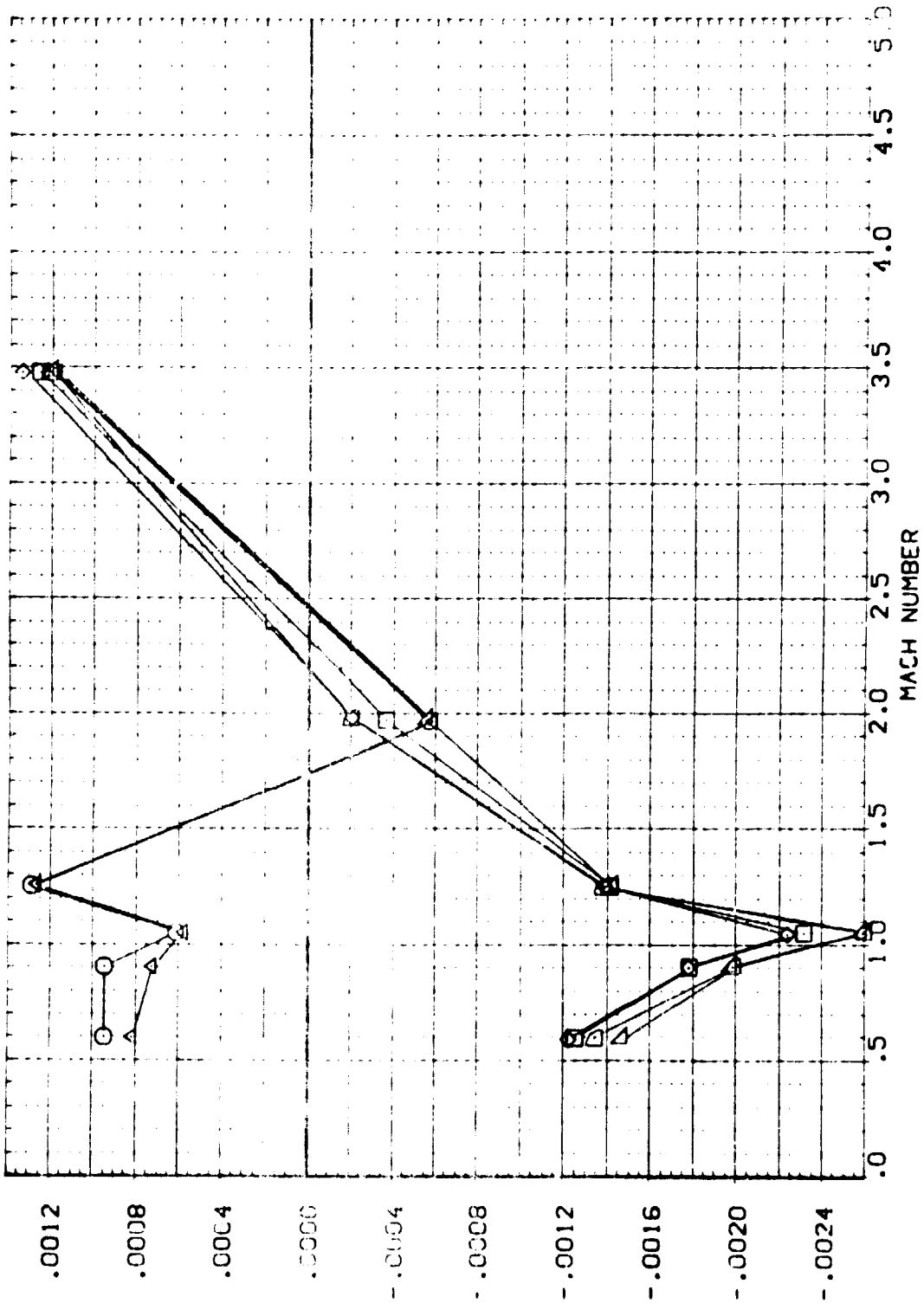






PITCHING MOMENT COEFFICIENT DERIVATIVE WITH ALPHA, CLM/F, PER DEGREE

DATA SET SYMBOL	CONF IGURATION DESCRIPTION	BETA	ORBITING	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83523)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	XMRP 2
(C83524)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	YMRP .0000
(C83525)	MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	ZMRP .0000
					SCALE .0040



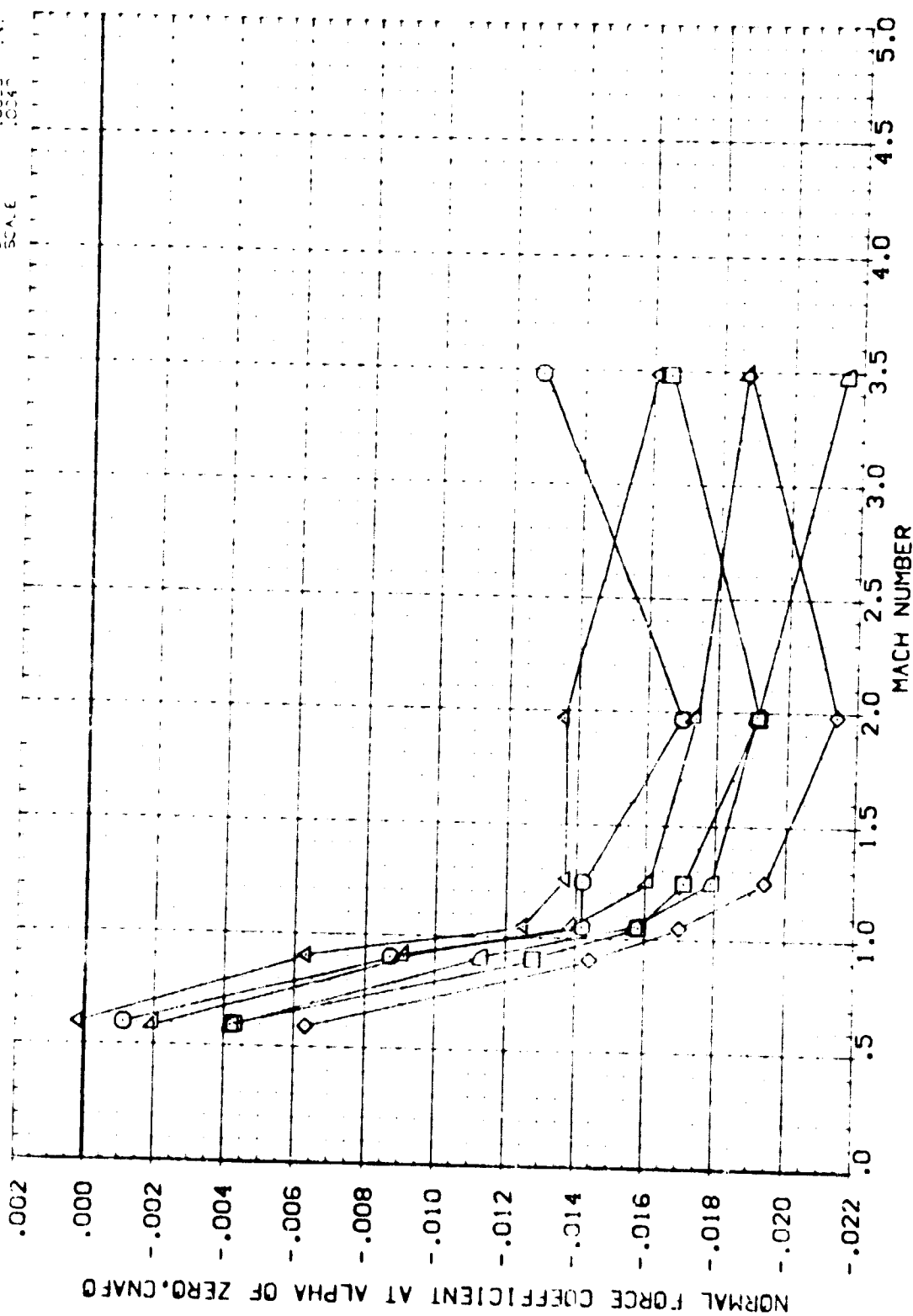
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83520) MSCC 5701(A31F) S3/21/(03)/(19)/(51)/(53/2)
 (C83521) MSCC 5701(A31F) S3/21/(03)/(51)/(53/2)
 (C83522) MSCC 5701(A31F) S3/21/(03)/(51)/(53/2)
 (C83523) MSCC 5701(A31F) S3/21/(03)/(51)/(53/2)
 (C83524) MSCC 5701(A31F) S3/21/(03)/(51)/(53/2)
 (C83525) MSCC 5701(A31F) S3/21/(03)/(51)/(53/2)

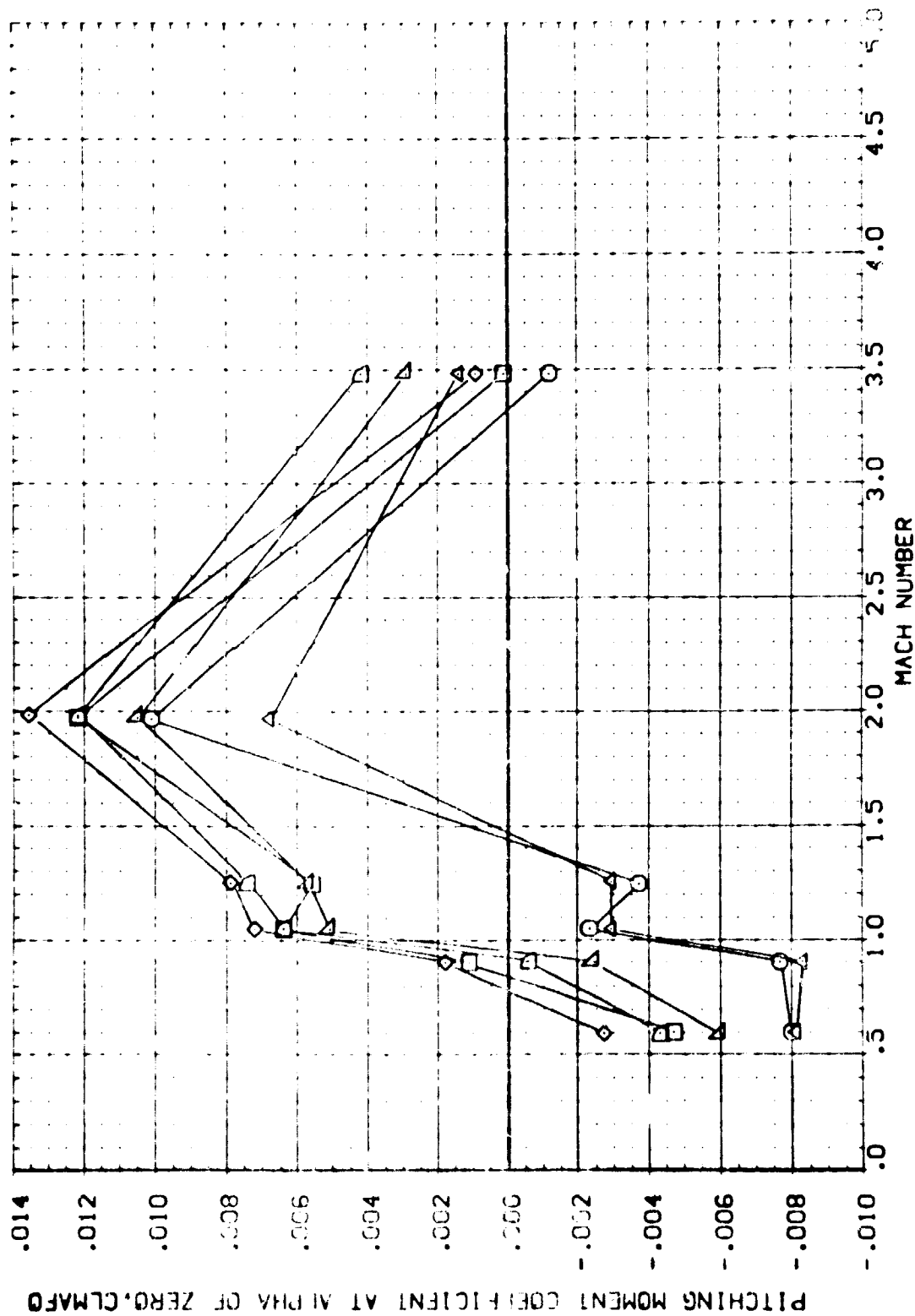
BETA G-RING DELTA Z

REFERENCE INFORMATION
 SREF .5720
 LREF 3.1416
 BREF 1.5708
 XREF 2.5480
 YREF .0000
 ZREF .0000
 SCALE .004



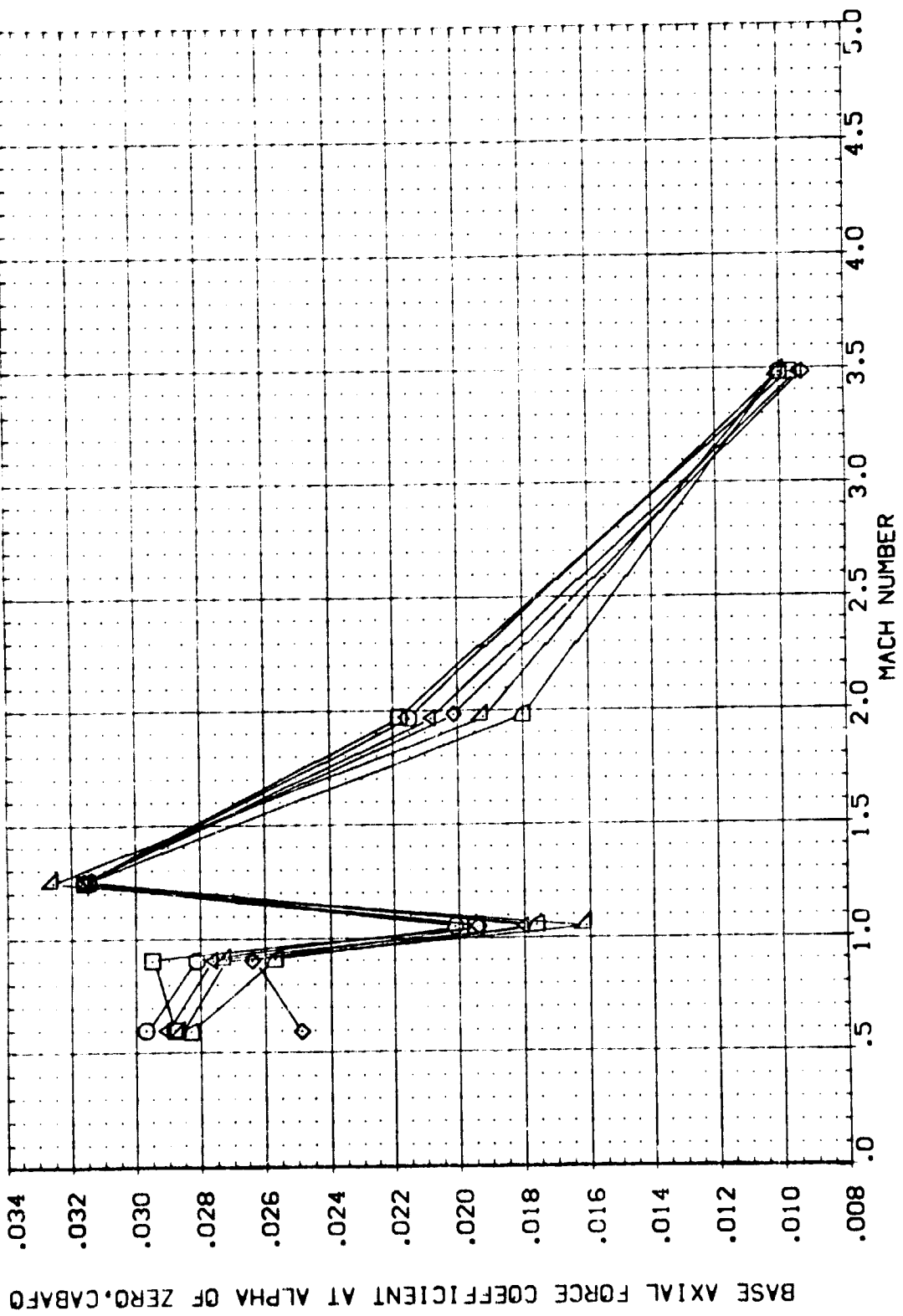
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)(U5)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	SREF .9720 SQ IN
(C83521)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	LREF 5.3130
(C83522)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	BREF 5.3130
(C83523)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	XREF 2.5490
(C83524)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	YREF .0000
(C83525)	MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	ZREF .0000
					SCALE .0340



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

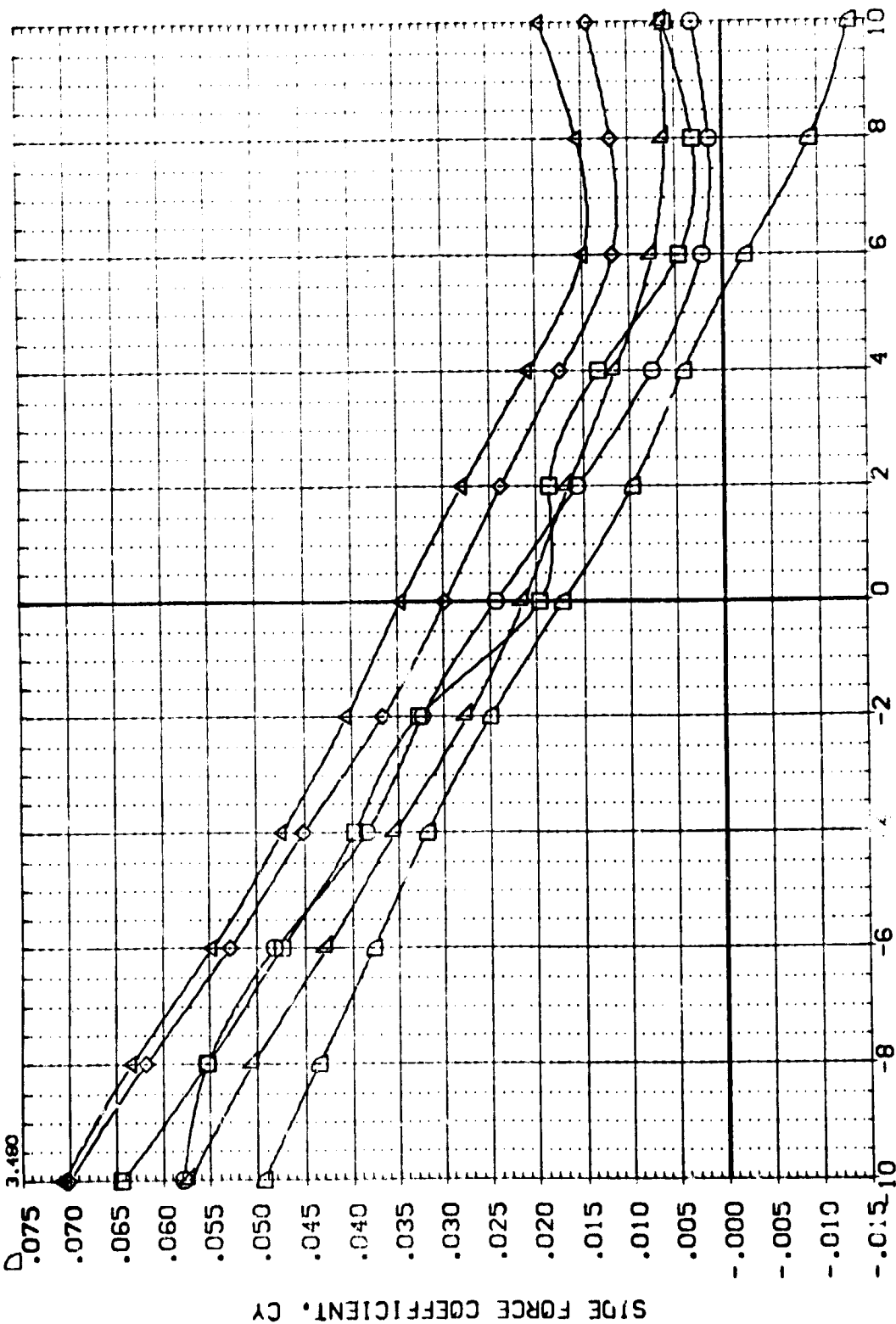
DATA SET SYMBOL	CONF IGURATION DESCRIPTION	BETA	CRBINC	DELTA Z	REFERENCE INFORMATION
(C83520)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.140	SREF .9720 SQ. IN
(C83521)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.140	SREF 5.3130 IN.
(C83522)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.140	BREF 5.3130 IN.
(C83523)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	-.500	.280	XMRP 2.5490 IN.
(C83524)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	.500	.280	YMRP .0000 IN.
(C83525)	MSFC 570((A31F)) (S3/2)/(03)/(T9)(U5)/(S3/2)	.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

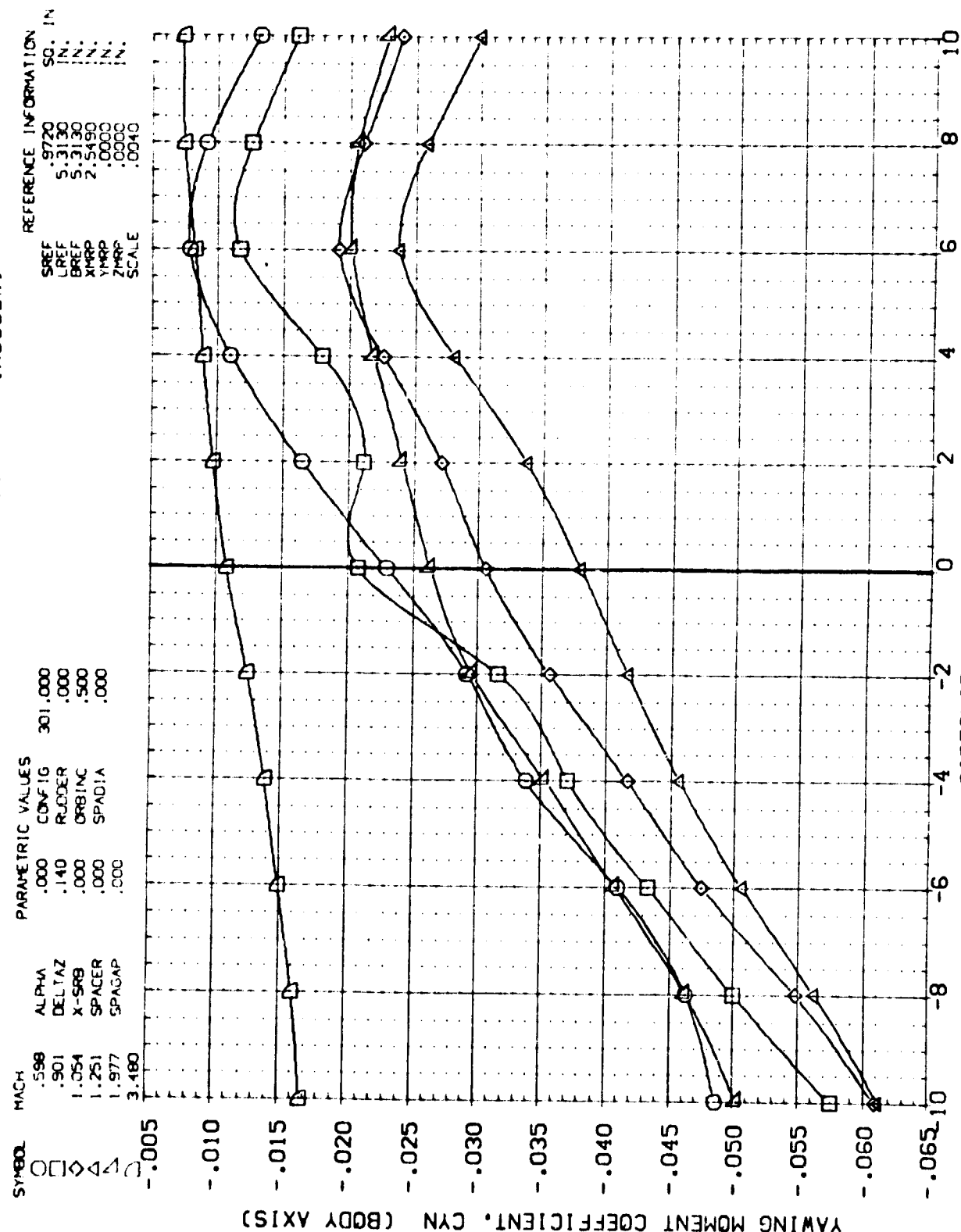
MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2) (A83S26)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.598	ALPHA	SREF
□	.901	DELTA Z	LREF
◇	1.051	X-SRB	BREF
△	1.251	SPACER	XTRP
▽	1.577	SPAGAP	YTRP
	3.480		ZTRP
			SCALE
			.9720
			5.3130
			5.3130
			2.5490
			.0000
			.0000
			.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

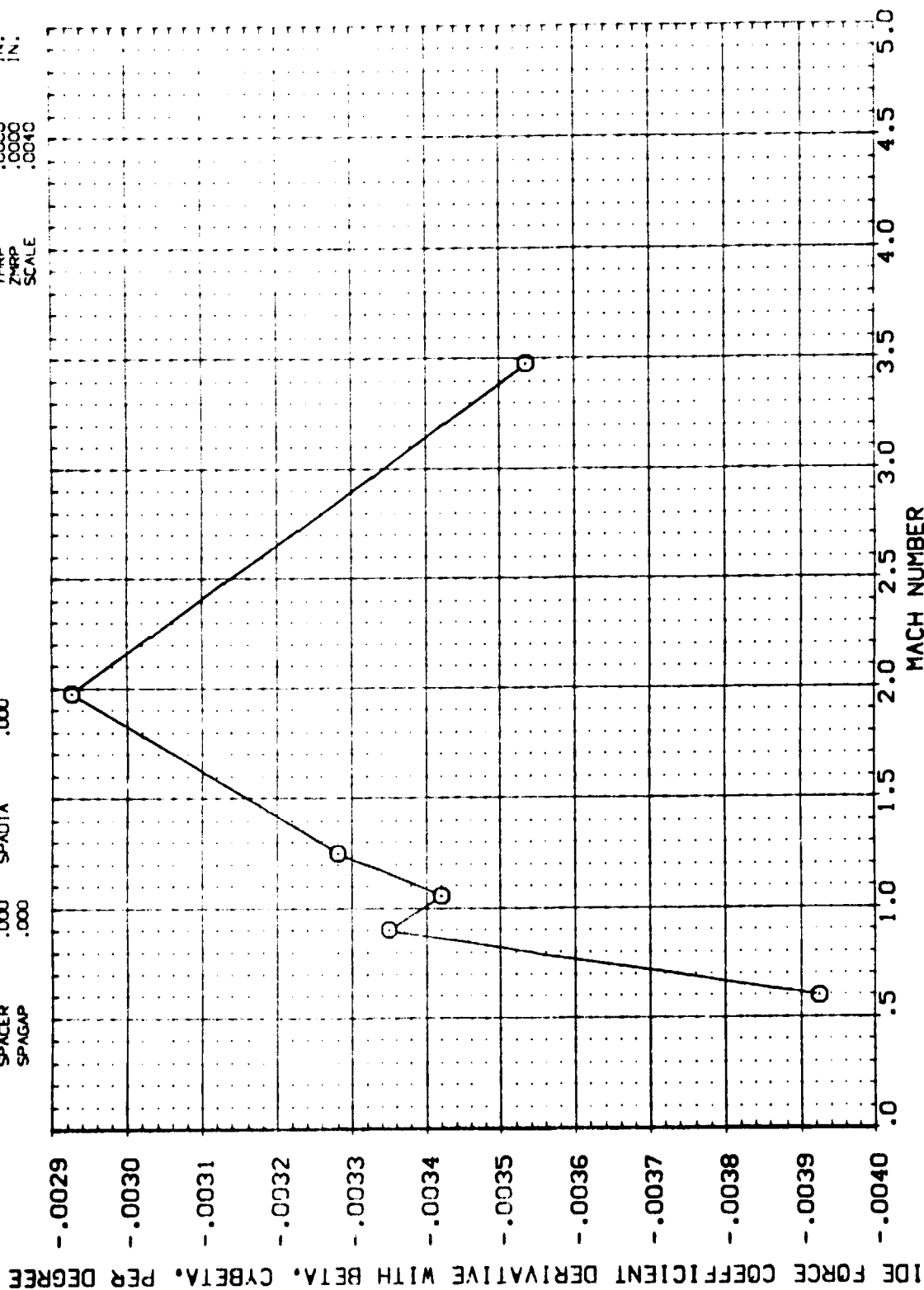
MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)/(S3/2) (A83S26)



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2) (A83S26)

PARAMETRIC VALUES				REFERENCE INFORMATION			
ALPHA	.000	CONFIG	301.000	SREF	.9720	SO	IN
DELTAZ	.140	RUDDER	.000	LREF	5.3130	IN	IN
X-SRB	.000	ORBINC	.500	BREF	5.3130	IN	IN
SPACER	.000	SPADIA	.000	XMRP	2.5450	IN	IN
SPAGAP	.000			ZMRP	.0000	IN	IN
				SCALE	.0040		



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)/(S3/2) (A83S26)

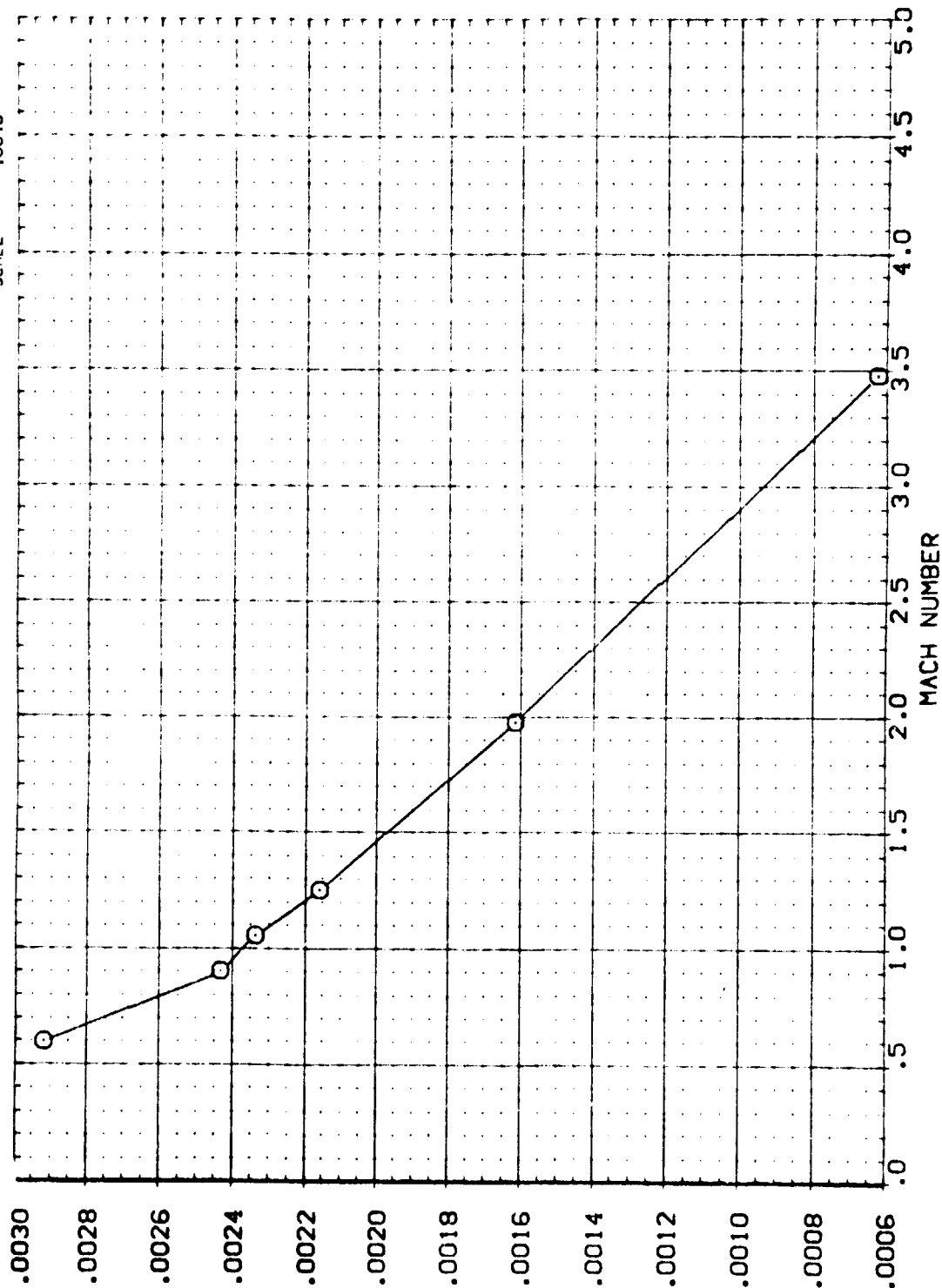
PARAMETRIC VALUES

ALPHA	.000	CONF IG	301.000
DELTA Z	.140	R UDDER	.000
X-SRB	.000	ORBIT INC	.500
SPACER	.000	SPADIA	.000
SPAGAP	.000		

REFERENCE INFORMATION

SREF	.9720	SG	IN
LREF	5.3130	IN	IN
BREF	5.3130	IN	IN
YMRP	2.5480	IN	IN
ZMRP	.0000	IN	IN
SCALE	.0040		

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)/(S3/2)

(C83S34)

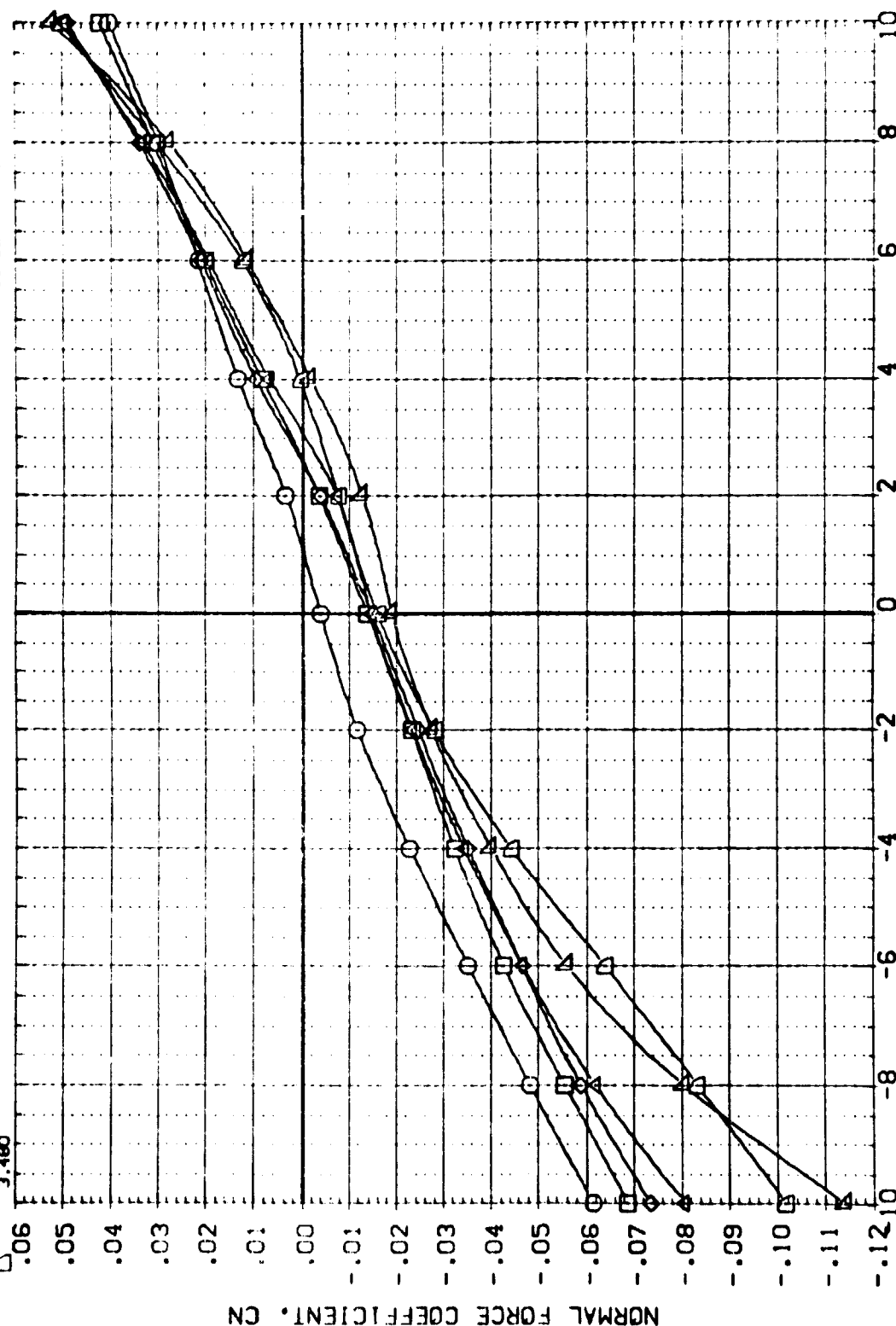
MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)(S3/2)

REFERENCE INFORMATION
SREF .9720
LREF 5.3130
RREF 5.3130
XMRP 2.5450
YMRP .0000
ZMRP .0000
SCALE .0010

PARAMETRIC VALUES
BETA .000
DELTAZ .140
X-SRB .000
SPACER .000
SPAGAP .000

MACH
.592
.902
1.048
1.244
1.969
3.480

SYMBOL
□
◇
△
▽
○

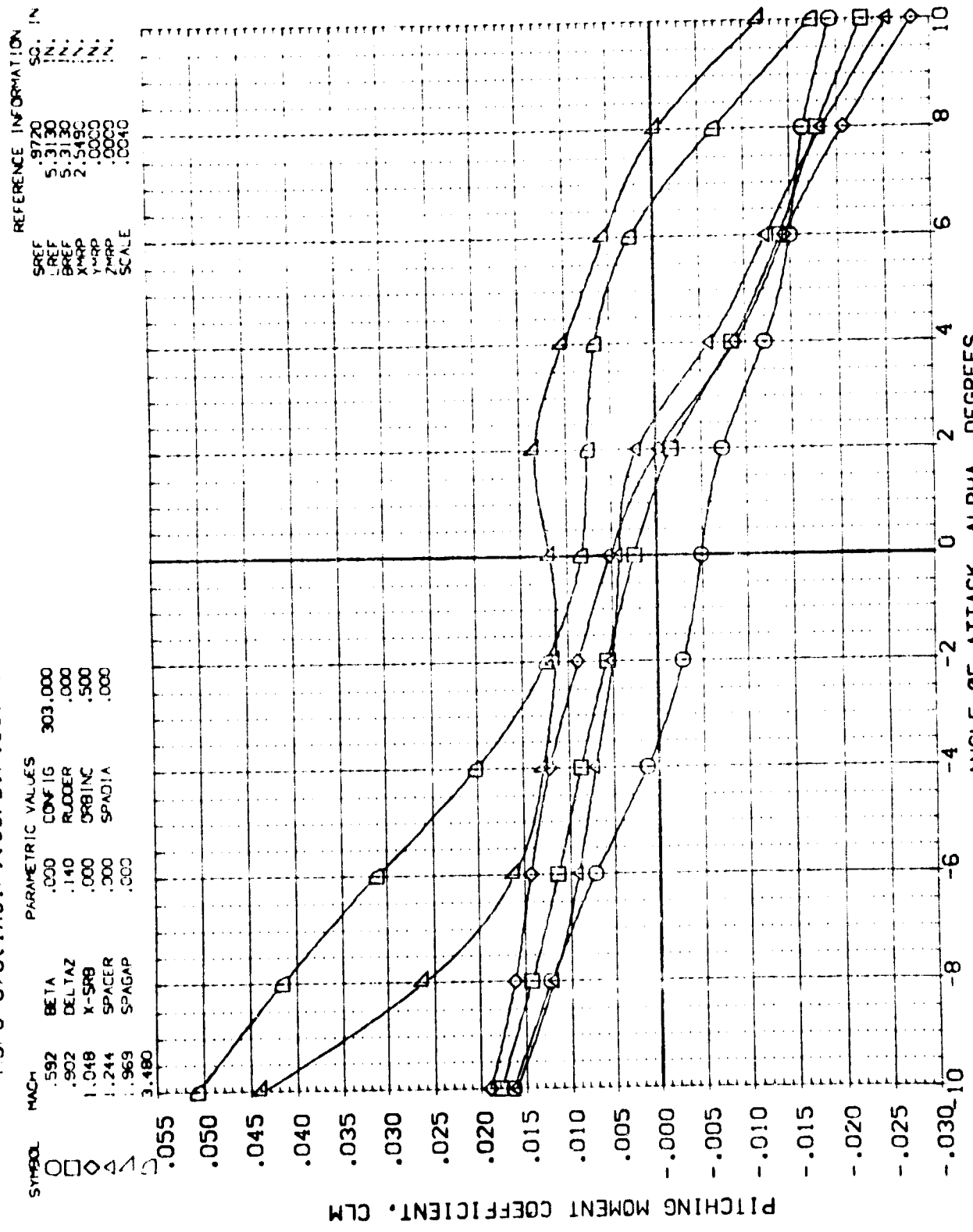


ANGLE OF ATTACK, ALPHA, DEGREES

STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

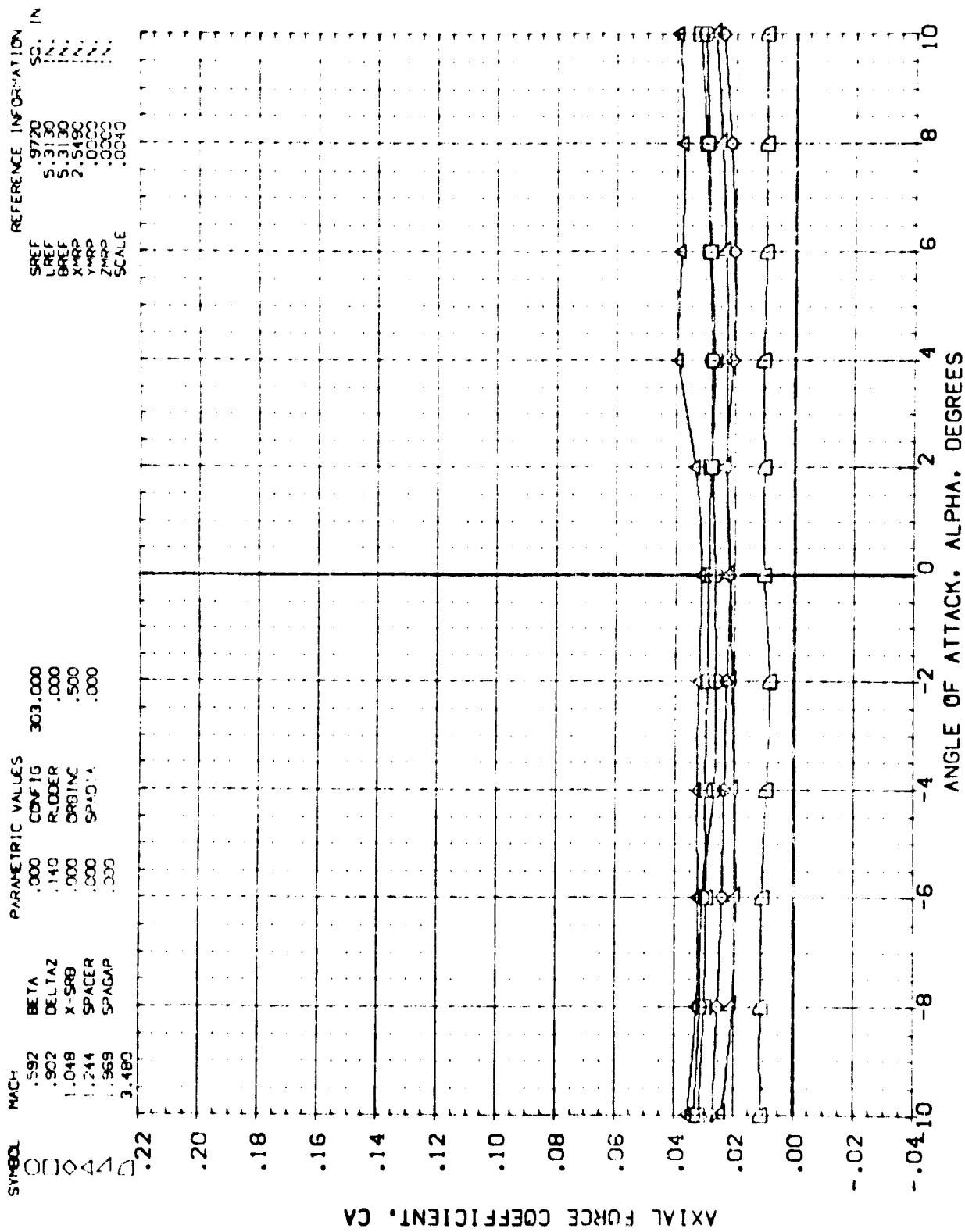
(C83S34)

MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2)





MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2) (C83534)



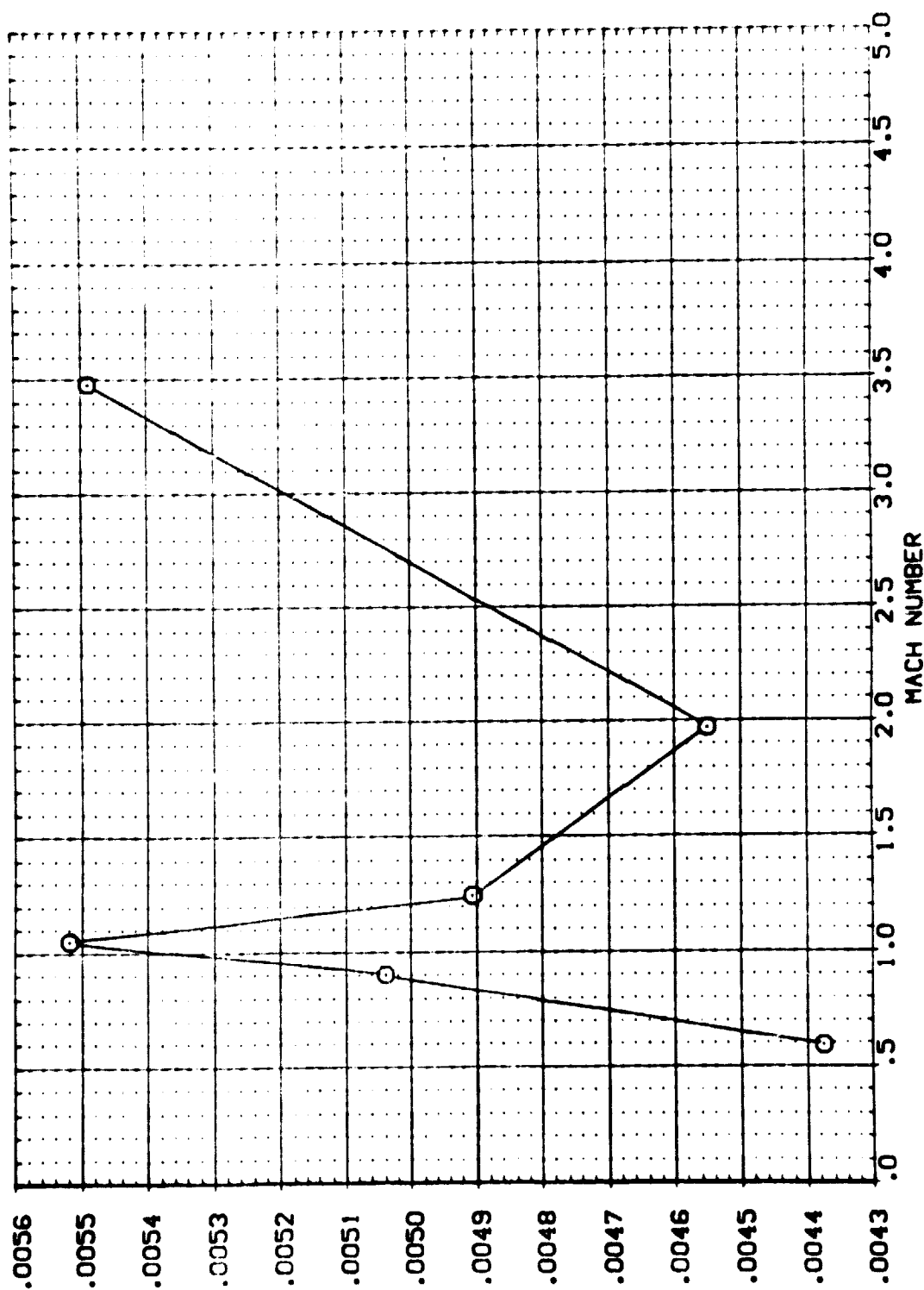
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2) (C83S34)

PARAMETRIC VALUES
 BETA .000 CONF IG 303.000
 DELTA Z .140 RUDDER .000
 X-SRB .000 ORBIT INC .500
 SPACER .000 SPADIA .000
 SPAGAP .000

REFERENCE INFORMATION
 SREF 9720 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.549C IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040

NORMAL FORCE COEFFICIENT DERIVATIVE WITH ALPHA, CNALFA, PER DEGREE



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

REFERENCE INFORMATION

SREF	.9720	SO	IN
LREF	5.3130		
BREF	5.3130		
XREF	2.5483		
YREF	.0000		
ZREF	.0000		
SCALE	.0040		

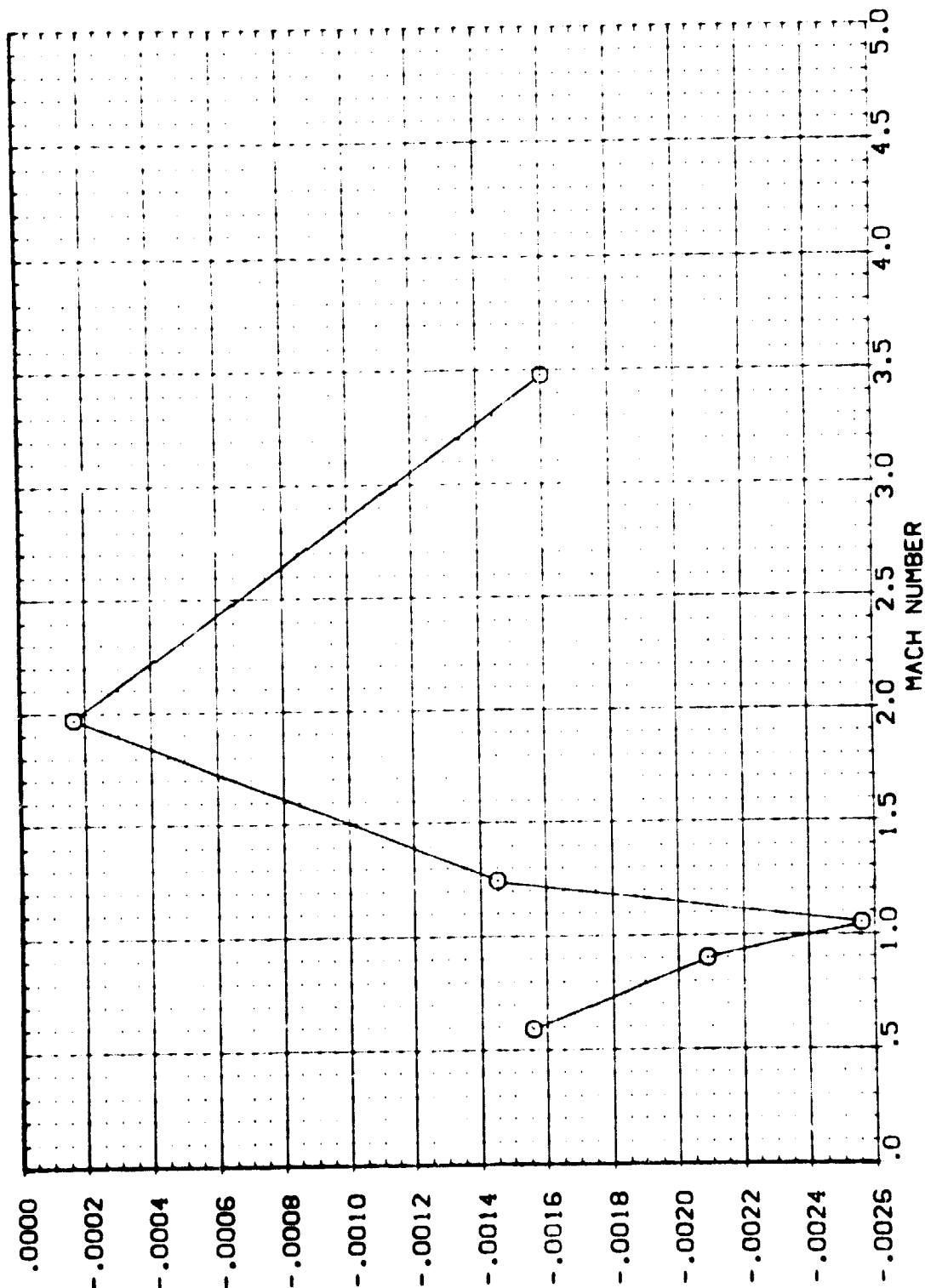
(C83S34)

MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2)

PARAMETRIC VALUES

BETA	.000	CONF IG	303.000
DELTA Z	.140	RUDDER	.000
X-SRB	.000	ORBITAL	.500
SPACER	.000	SPACIA	.000
SPAGAP	.000		

PITCHING MOMENT COEFFICIENT DERIVATIVE WITH ALPHA, CLALF, PER DEGREE



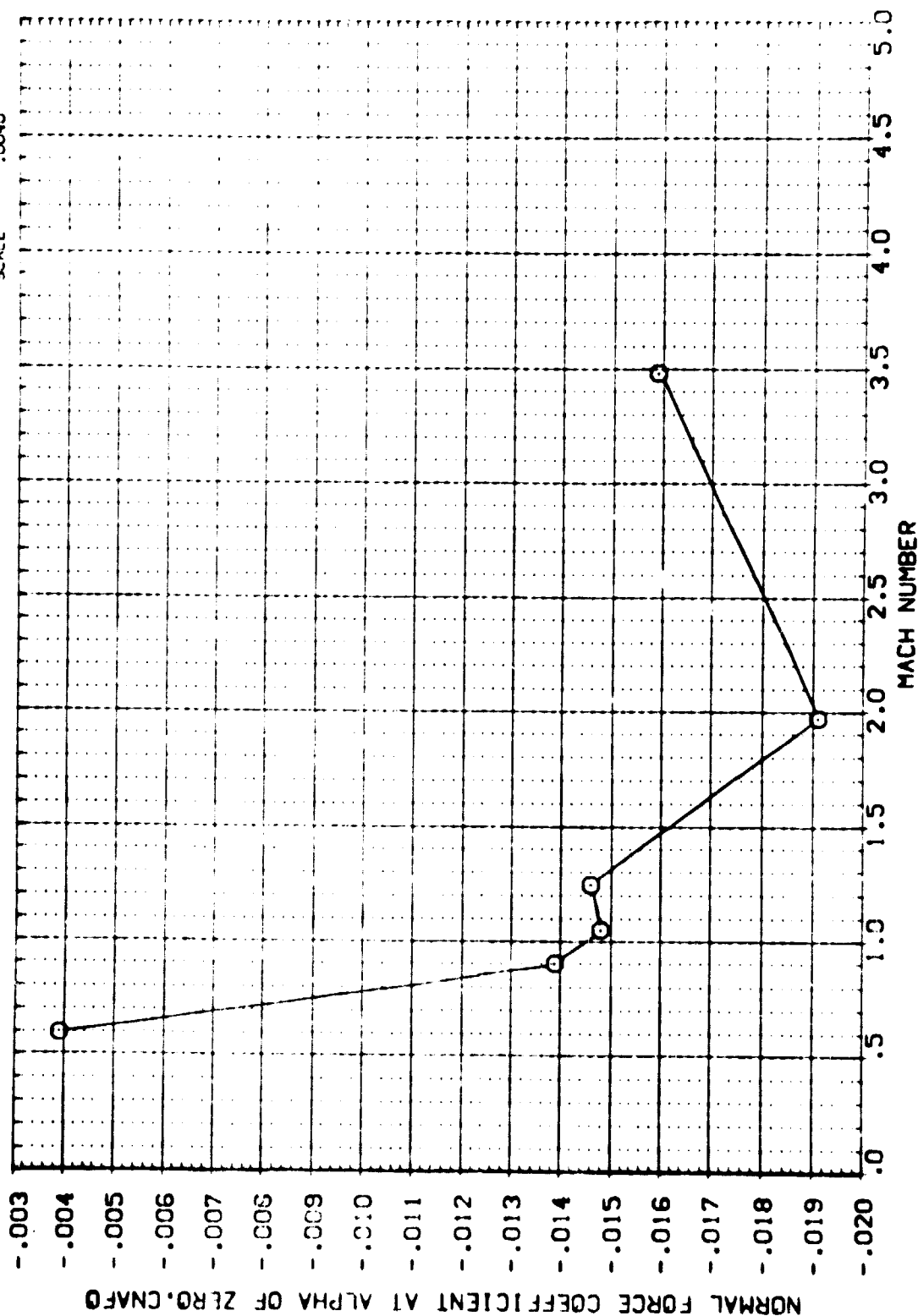
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

(C83S34)

MSFC 570(1A31F)(S3/2)/(03)/(19)(U5)(S3/2)

REFERENCE INFORMATION
SQ. IN
SREF .9720
LREF 5.3130
BREF 5.3130
XHP 2.5490
YHP .0000
ZHP .0000
SCALE .0040

PARAMETRIC VALUES
BETA .000 CONF IG 303.000
DELTA Z .140 RUDDER .000
X-SRB .000 ORB INC .500
SPACER .000 SPADIA .000
SPAGAP .000

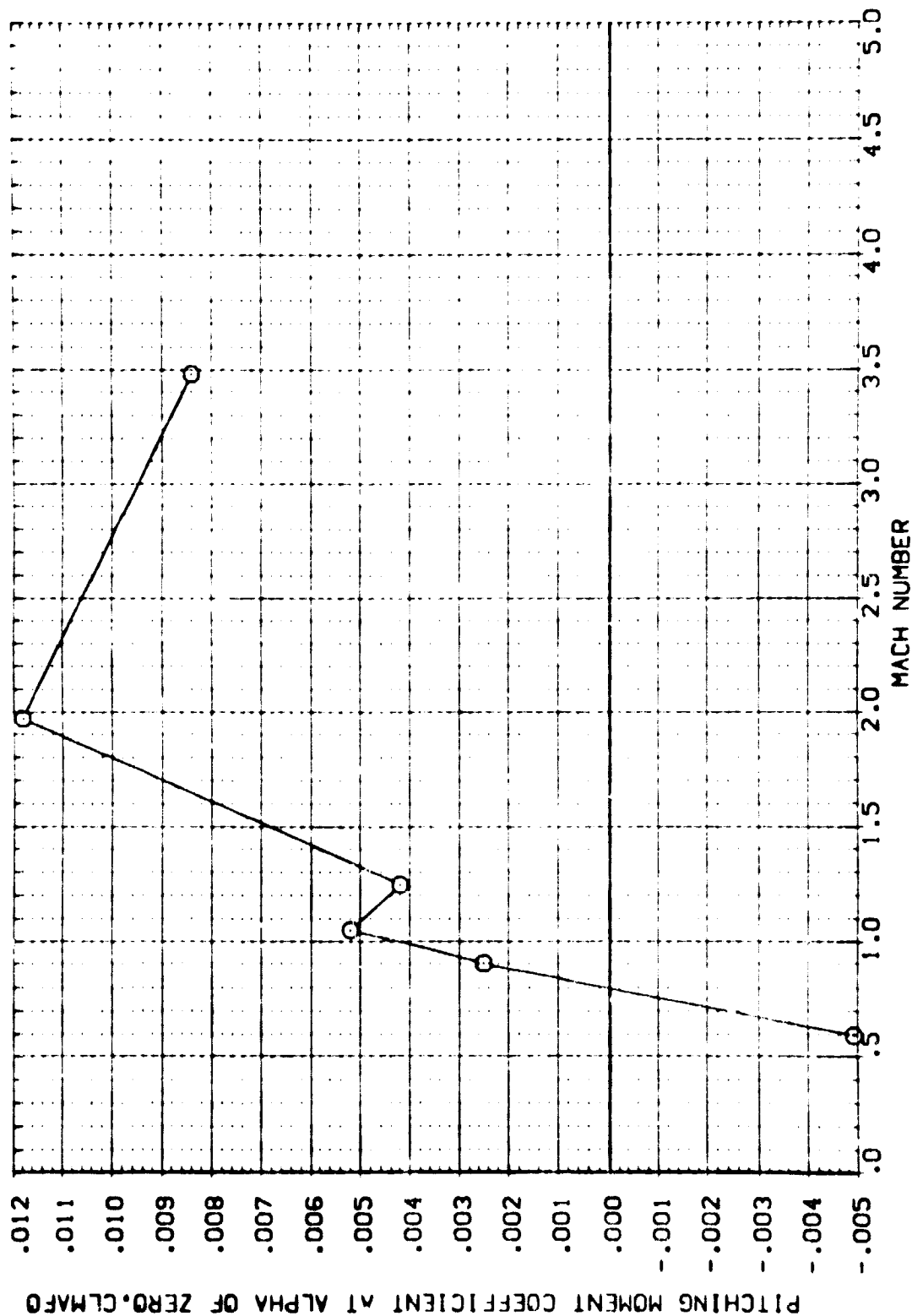


STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)(U5)(S3/2)

MSFC 570(IAG1F)(S3/2)/(03)/(T9)(U5)(S3/2) (C83S34)

REFERENCE INFORMATION
SREF .9720 SQ. IN
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

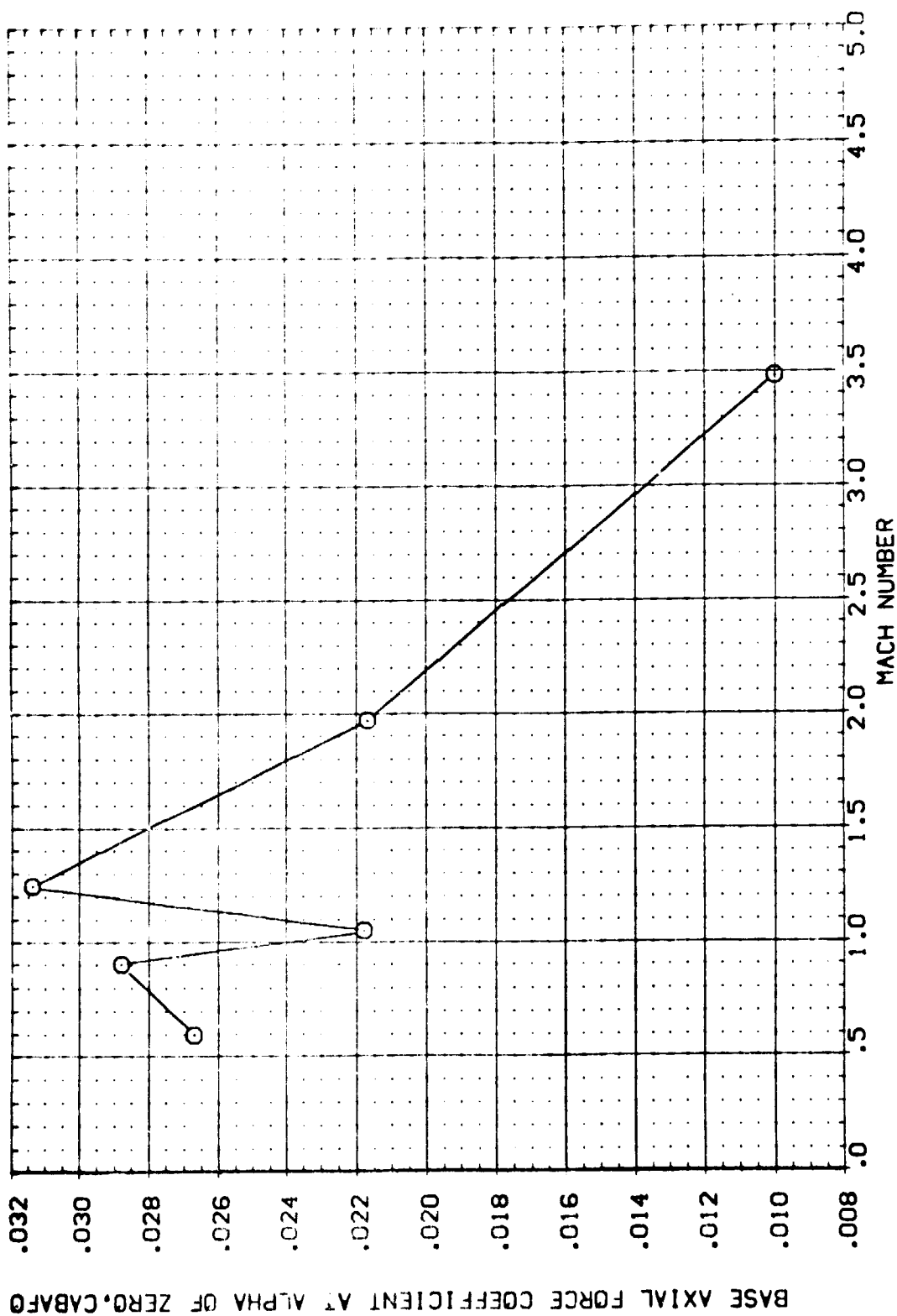
PARAMETRIC VALUES
BETA .000 CONFIG 303.000
DELTA Z .140 RUDDER .000
X-SRB .000 ORBINC .500
SPACER .000 SPADIA .000
SPAGAP .000



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)(S3/2) (C83534)

PARAMETRIC VALUES				REFERENCE INFORMATION			
BETA	.000	CONF IG	303.000	SREF	.9720	SO	IN
DELTA Z	.140	RUDER	.000	U REF	5.3130	IN	IN
X-SRB	.000	ORBIT	.500	BREF	5.3130	IN	IN
SPACER	.000	SPADIA	.000	YMRP	2.5490	IN	IN
SPAGAP	.000			ZMRP	.0000	IN	IN
				SCALE	.0010		



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

(A83535)

MSFC 570(IA31F)(S3/2)/(03)/(T9)(U5)(S3/2)

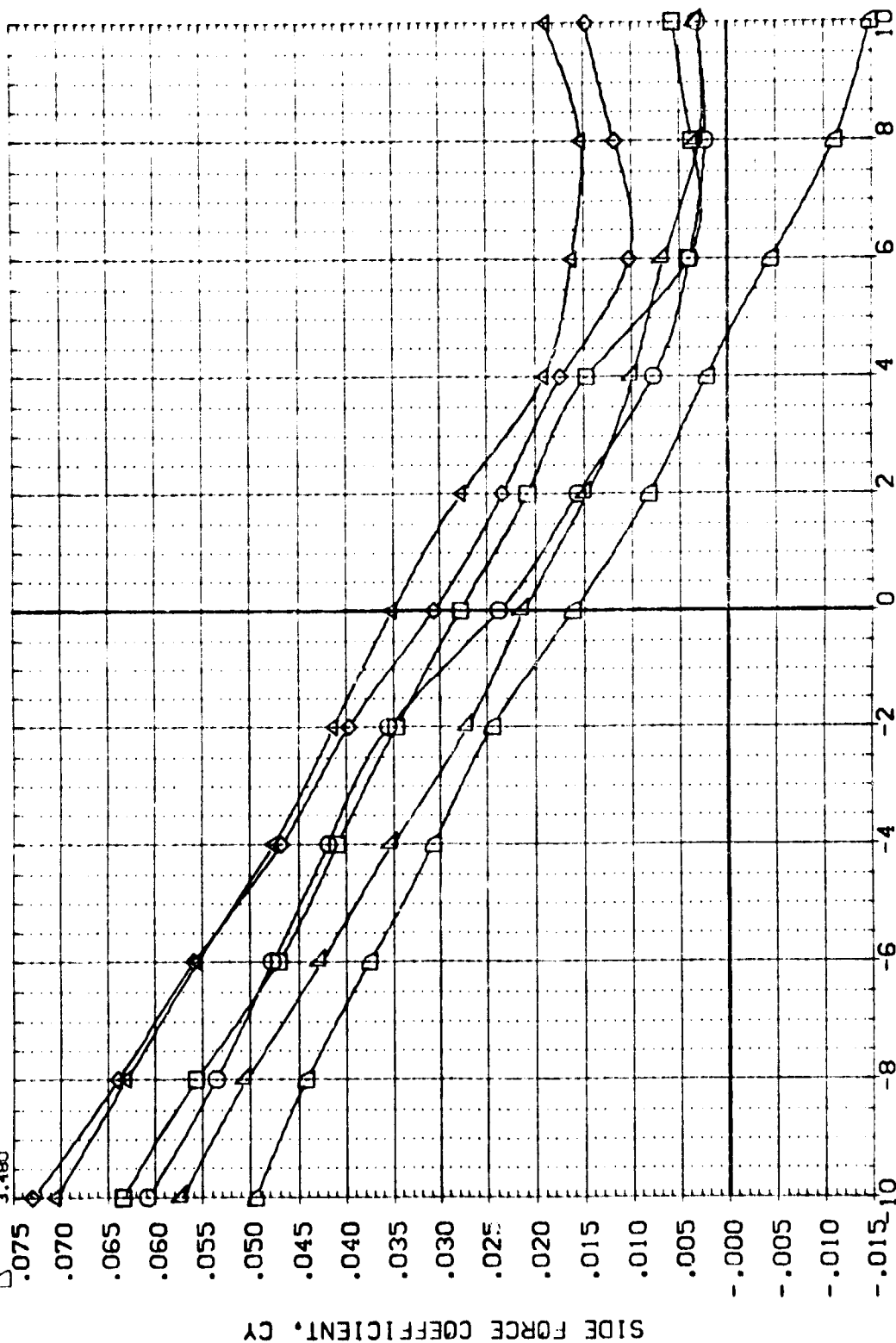
REFERENCE INFORMATION
SREF .9720 SQ. IN
LREF 5.3130 IN
BREF 5.3130 IN
XMRP 2.5490 IN
YMRP .0000 IN
ZMRP .0000 IN
SCALE .0040

PARAMETRIC VALUES
CONF IG 303.000
RUDDER .000
DRBINC .500
SPADIA .000

ALPHA
DELTA Z
X-SRB
SPACER
SPAGAP

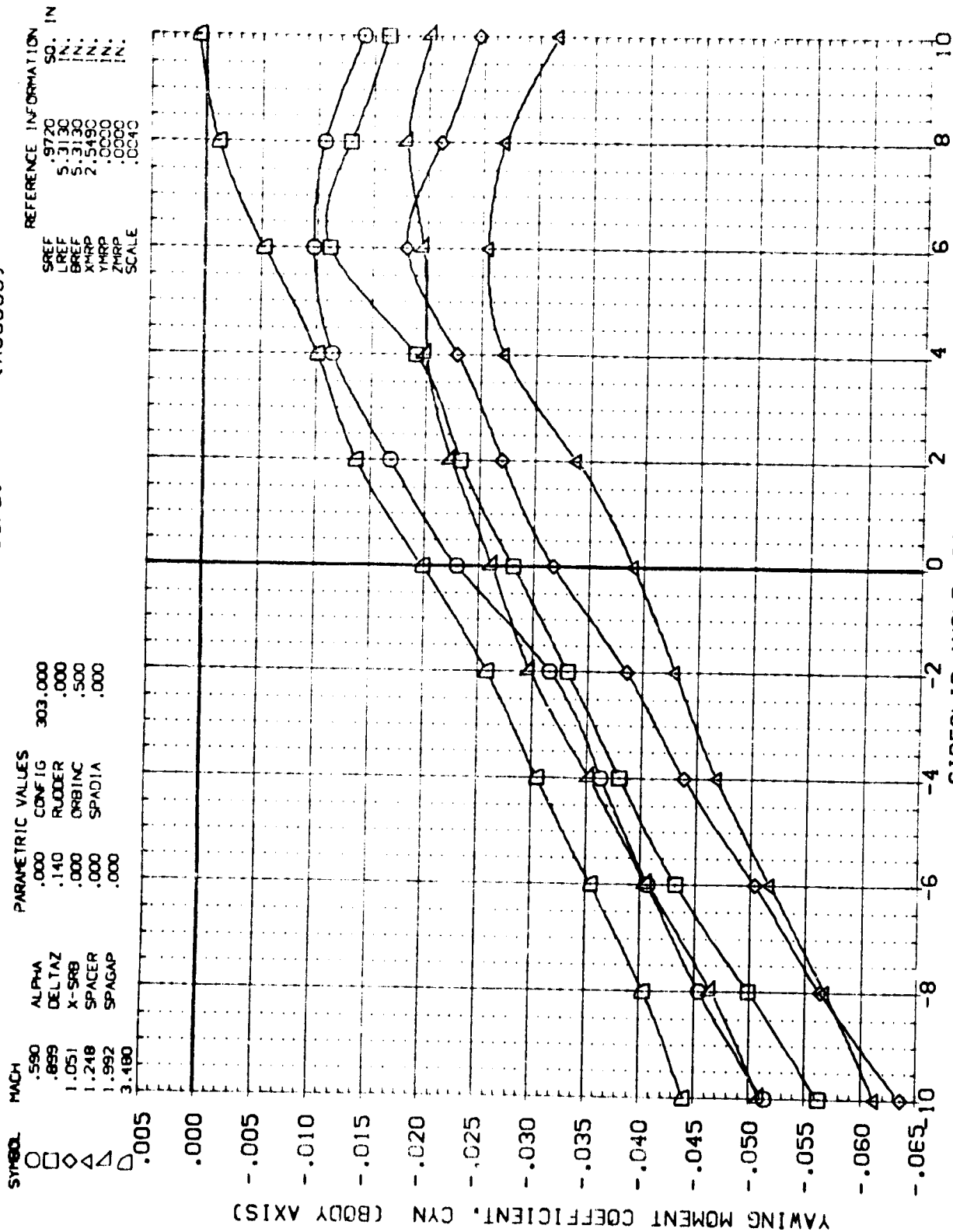
MACH
.590
.899
1.051
1.248
1.992
3.180

SYMBOL
□
□
□
△
△



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2) (A83535)



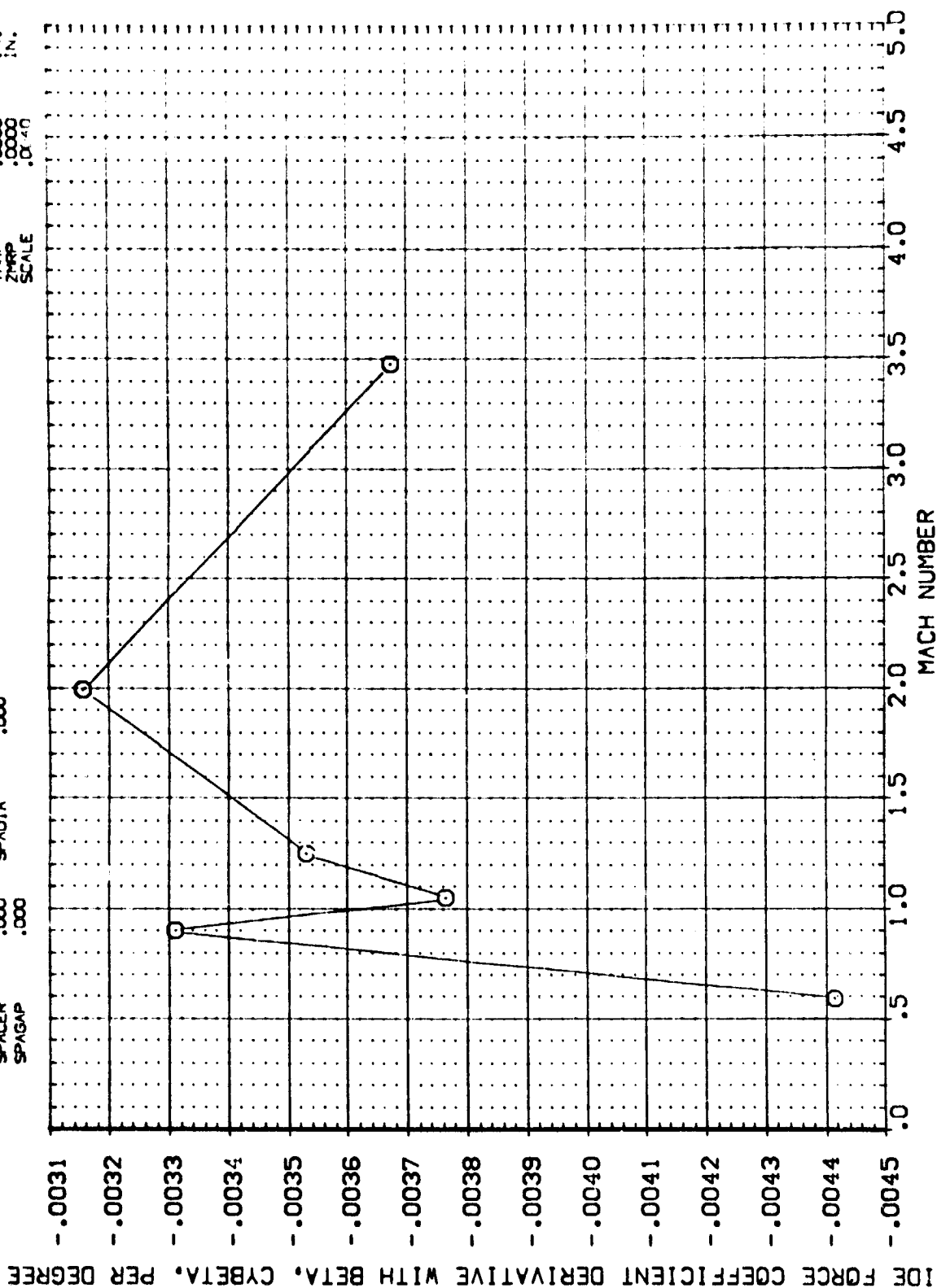
STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

(A83S35)

MSFC 570(IA31F)(S3/2)/(03)/(19)(U5)(S3/2)

REFERENCE INFORMATION
SREF .9720 50. IN
LREF 5.3130 IN.
BREF 5.3130 IN.
XTRP 2.5430 IN.
YTRP .0000 IN.
ZTRP .0000 IN.
SCALE .0140

PARAMETRIC VALUES
ALPHA .000 CONFIG 303.000
DELTAZ .140 RUDDER .000
X-SRB .000 ORBINC .500
SPACER .000 SPADIA .000
SPAGAP .000



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(19)(U5)(S3/2)

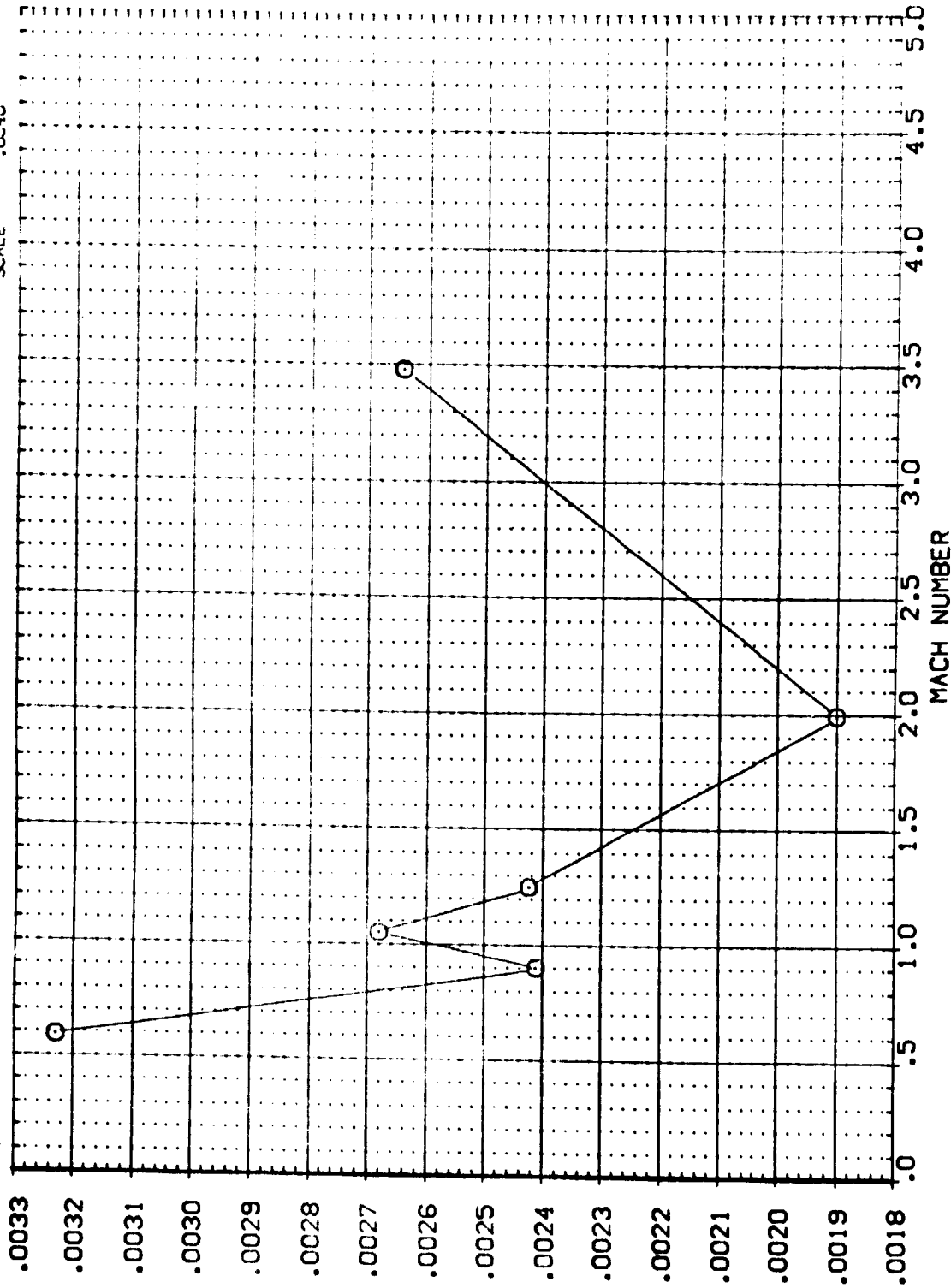
(A83S35)

MSFC 570(1A31F)(S3/2)/(03)/(T9)(U5)(S3/2)

REFERENCE INFORMATION
SREF .9720 SQ. IN
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0010

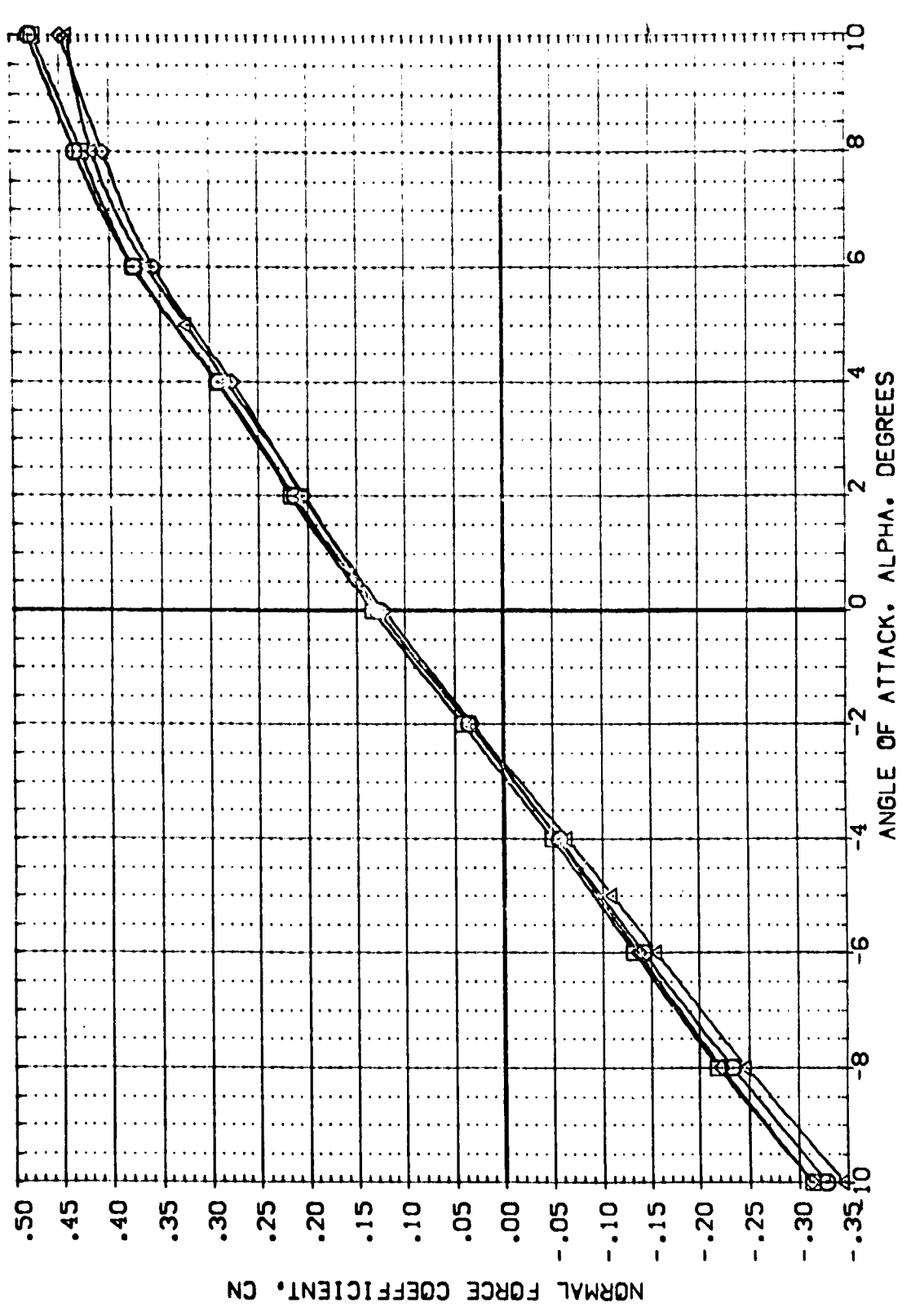
PARAMETRIC VALUES
ALPHA .000 CONFIG 303.000
DELTAZ .140 RUDDER .000
X-SRB .000 ORBINC .500
SPACER .000 SPADIA .000
SPAGAP .000

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)(U5)(S3/2)

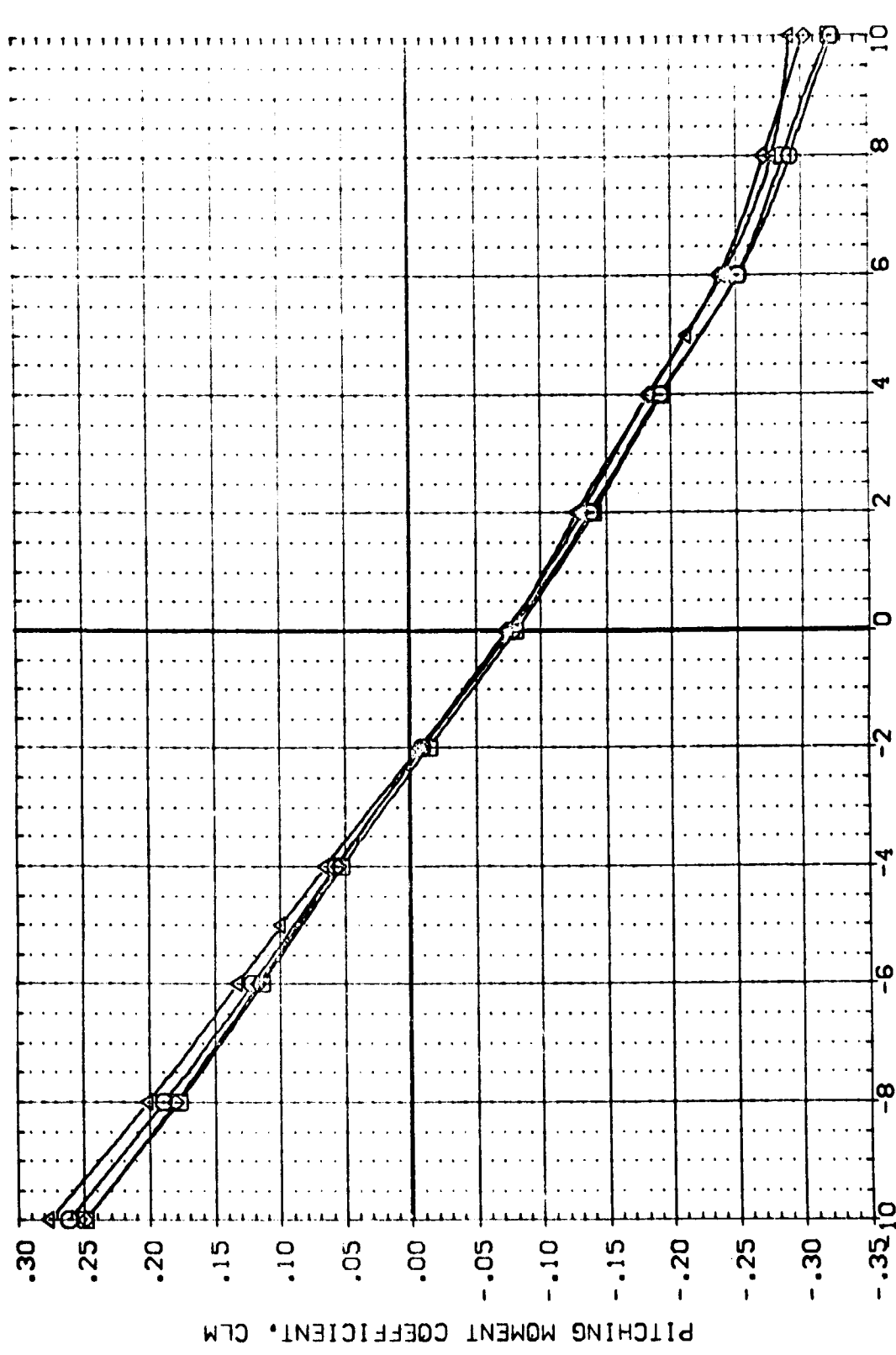
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(C83040)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))VIE	.500	7.800	.100	.050	SREF	6.1980
(C83041)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))VIE	.500	9.100	.200	.050	LREF	5.3130
(C83042)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))VIE	.500	11.120	.300	.050	BREF	5.3130
(C83002)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))VIE	.500	.000	.000	.000	XMRP	2.5490
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0010
							SO: IN
							2.2722



EFFECT ON ORBITER OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(C83040)	MSFC 570(IA31F)(03)/(I9)/(S3/2)/(S3/2)YIE	.500	7.800	.100	.050	SREF 6.1980 SQ .IN
(C83041)	MSFC 570(IA31F)(03)/(I9)/(S3/2)/(S3/2)YIE	.500	9.100	.200	.050	LREF 5.3130 SQ .IN
(C83042)	MSFC 570(IA31F)(03)/(I9)/(S3/2)/(S3/2)YIE	.500	11.120	.300	.050	BREF 5.3130 SQ .IN
(DE3002)	MSFC 570(IA31F)(03)/(I9)/(S3/2)/(S3/2)	.500	.000	.000	.000	YMRP 2.5450 SQ .IN
						ZMRP .0000 SQ .IN
						SCALE .0010

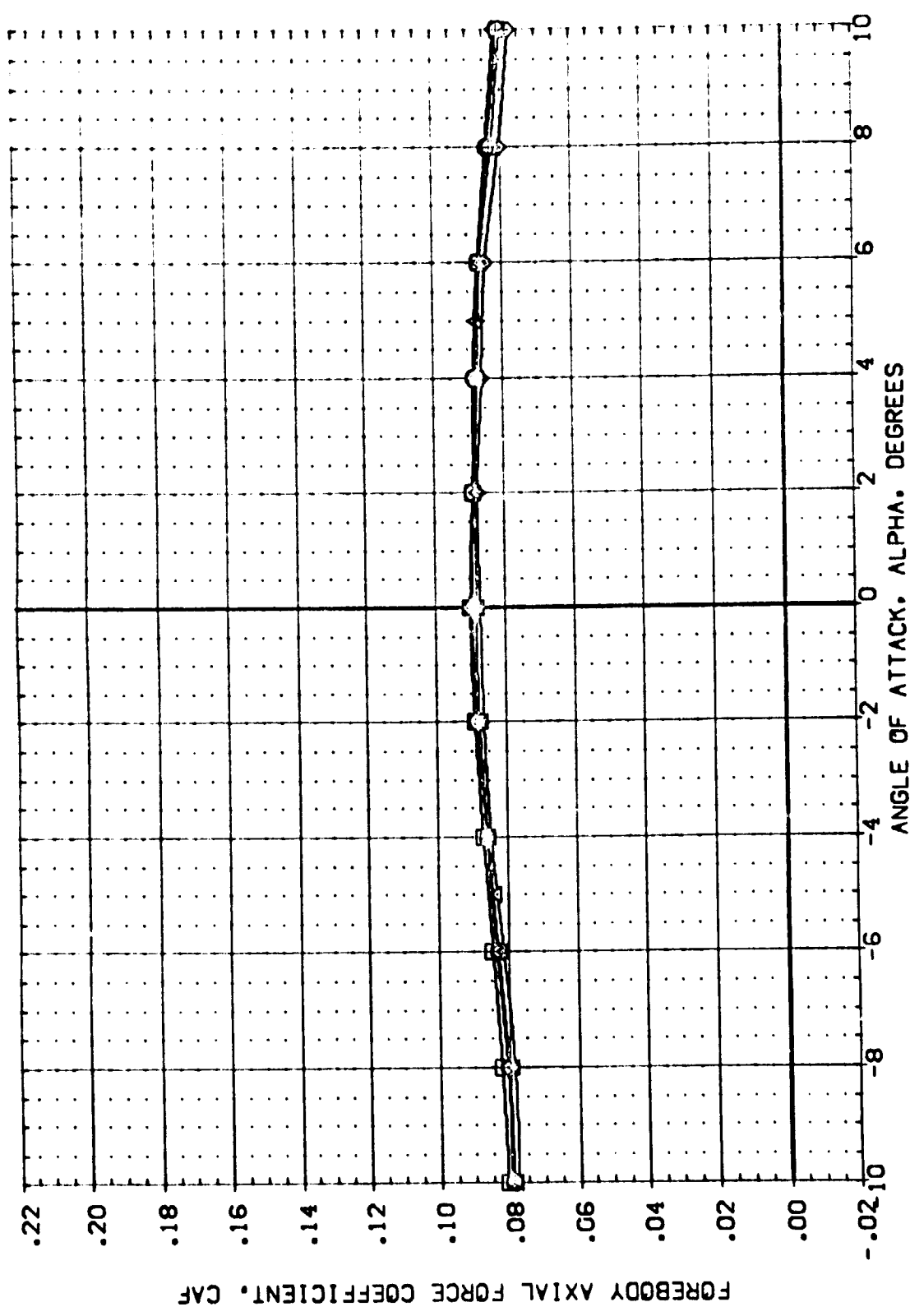


EFFECT ON ORBITER OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(C83040)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	7.800	.100	.050	SREF 6.1980 SO: IN
(C83041)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	9.100	.200	.050	LREF 5.3130 N: IN
(C83042)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	11.120	.300	.050	BREF 5.3130 N: IN
(D83002)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	.000	.000	.000	XREF 2.5490 N: IN
						YREF .0000 N: IN
						ZREF .0000 N: IN
						SCALE .0010



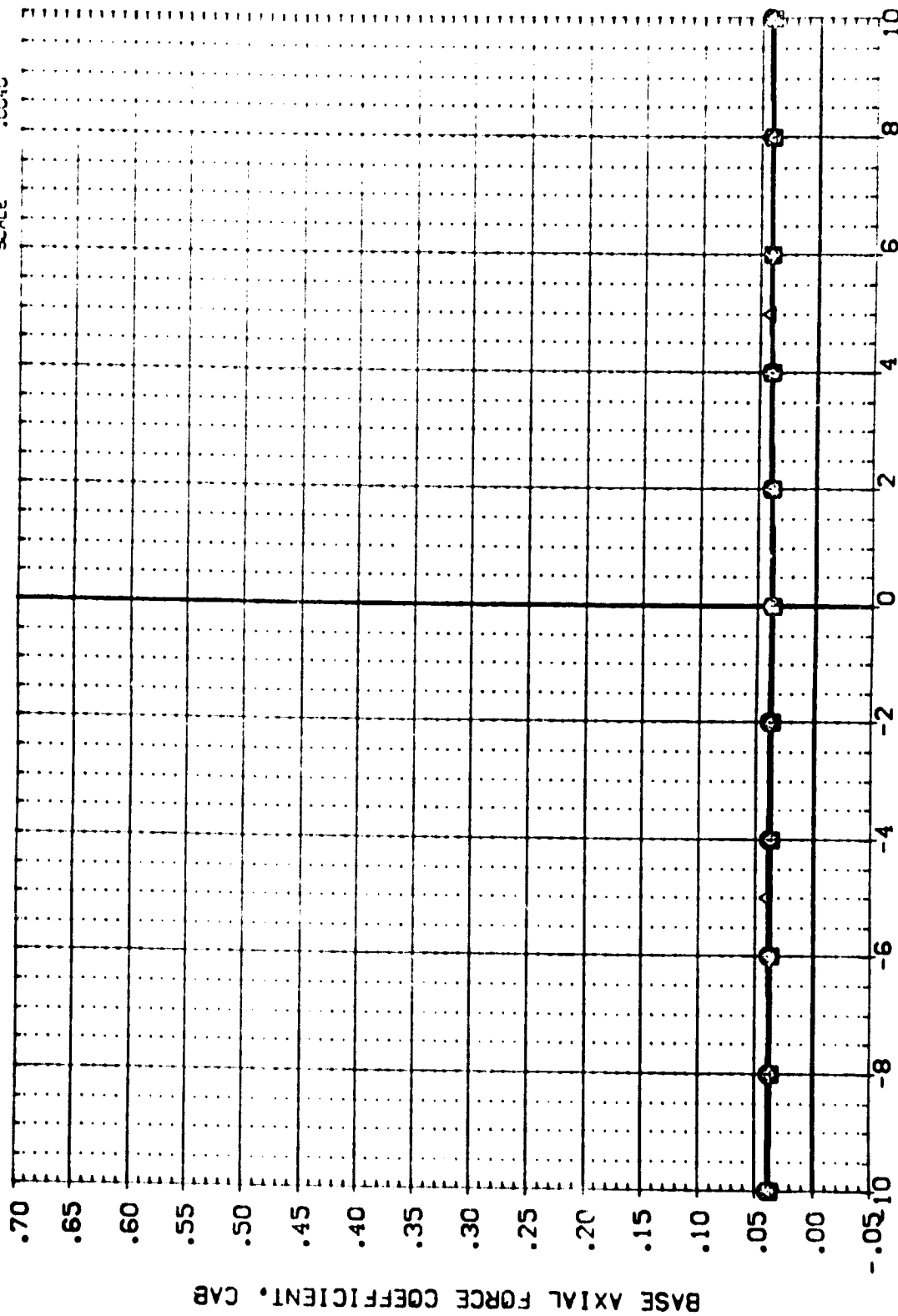
EFFECT ON ORBITER OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

CAJ MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (080040) MSFC 570((A31F)((03)/((19)/((S3/2)/((S3/2)/VIE
 (080041) MSFC 570((A31F)((03)/((19)/((S3/2)/((S3/2)/VIE
 (080042) MSFC 570((A31F)((03)/((19)/((S3/2)/((S3/2)/VIE
 (080002) MSFC 570((A31F)((03)/((19)/((S3/2)/((S3/2)/VIE

ORBITING SPACER SPADIA SPAGAP
 .500 7.800 .100 .050
 .500 9.100 .200 .050
 .500 11.120 .300 .050
 .500 .000 .000 .000

REFERENCE INFORMATION
 SREF 6.1990 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XPROP 2.5490
 YPROP .0000
 ZPROP .0000
 SCALE .0010



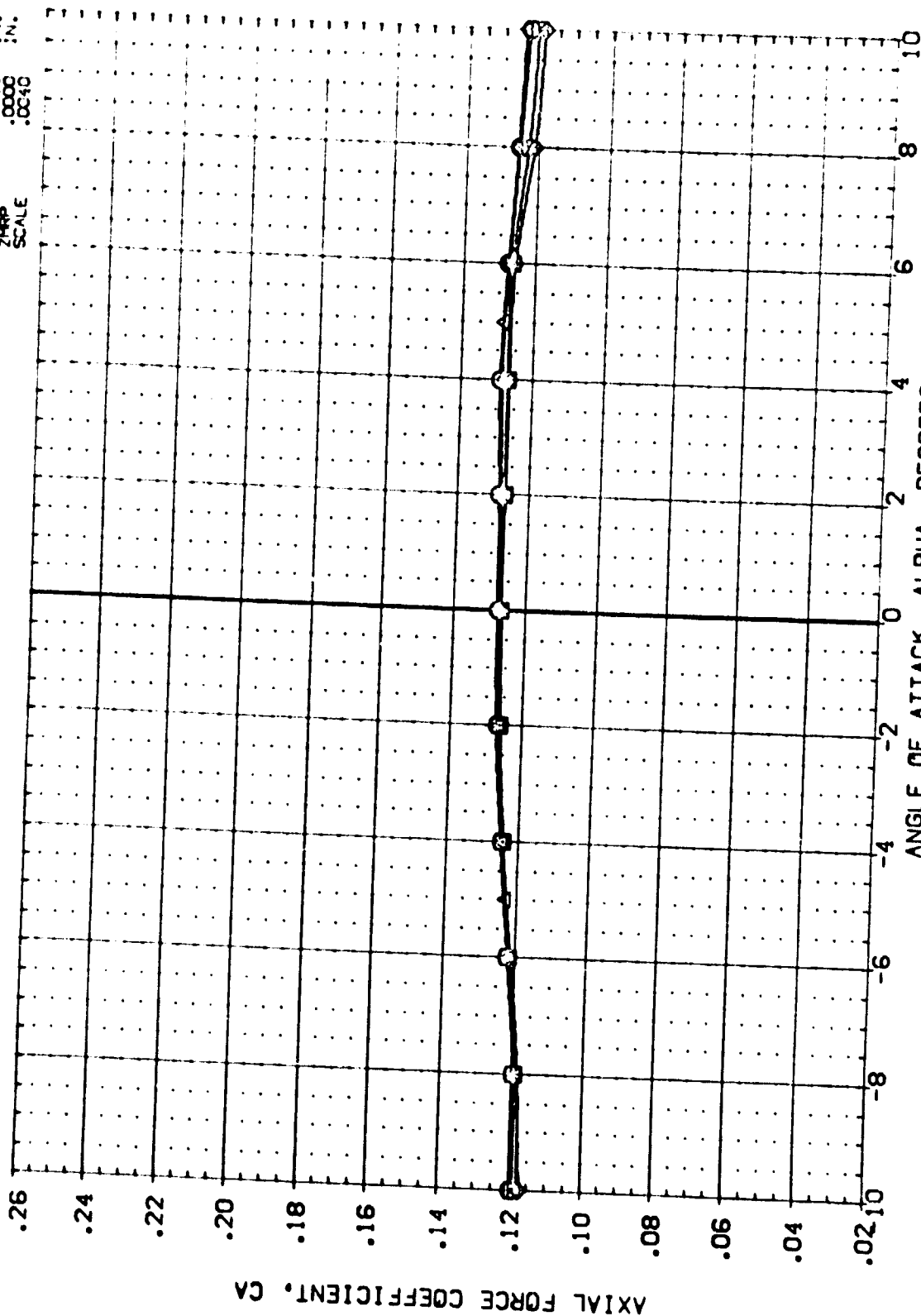
EFFECT ON ORBITER OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(030040) MSFC 570([A3IF](03)/[T9]/[S3/2]/[S3/2])VIE
 (030041) MSFC 570([A3IF](03)/[T9]/[S3/2]/[S3/2])VIE
 (030042) MSFC 570([A3IF](03)/[T9]/[S3/2]/[S3/2])VIE
 (030002) MSFC 570([A3IF](03)/[T9]/[S3/2]/[S3/2])VIE

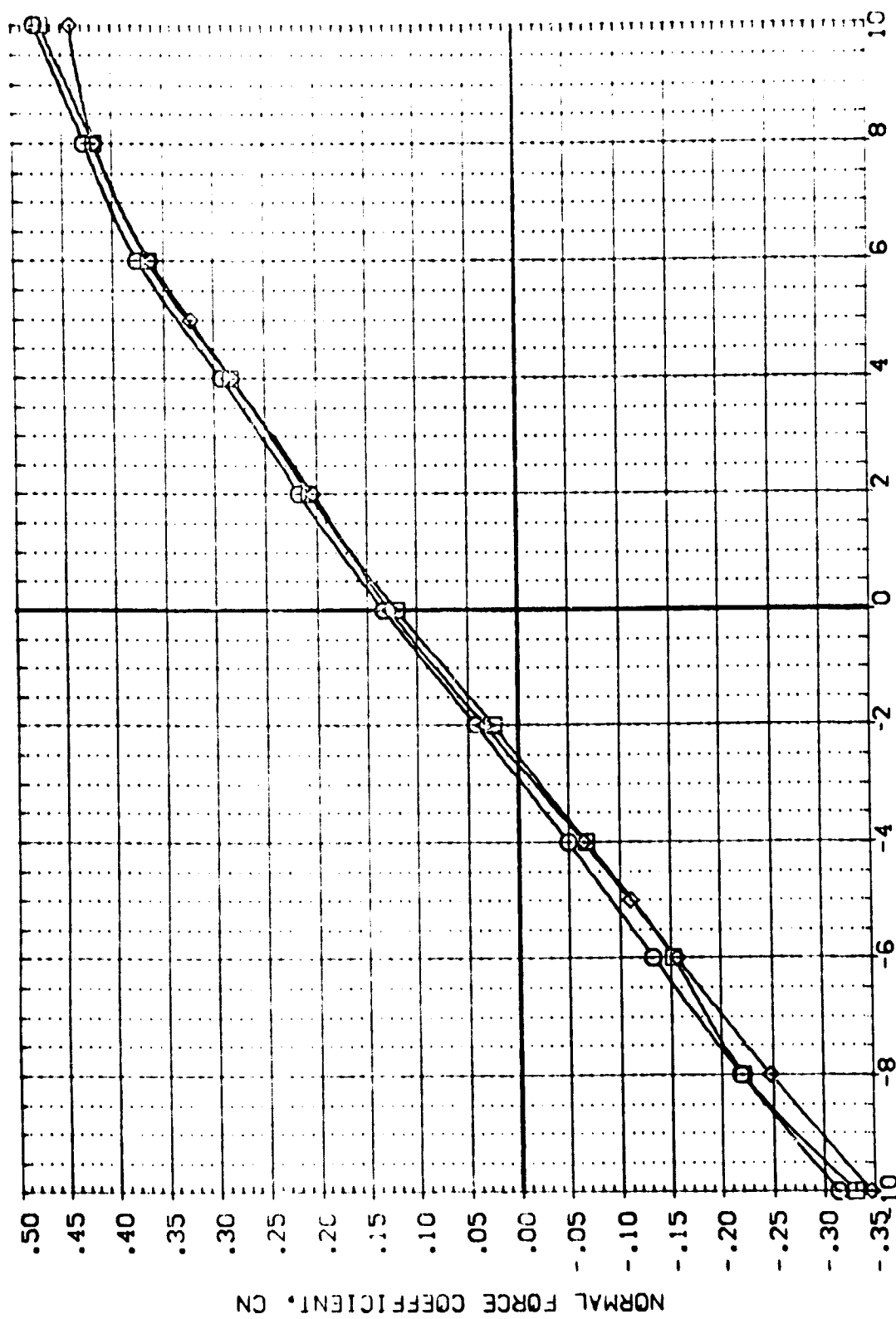
ORBIT INC SPACER SPADIA SPAGAP REFERENCE INFORMATION
 .500 7.800 .100 .050 SREF 6.1980 SQ IN
 .500 9.100 .200 .050 LREF 5.3130 IN
 .500 11.120 .300 .050 BREF 5.3130 IN
 .500 .000 .000 .000 XMRP 2.5450 IN
 .500 .000 .000 .000 YMRP .0000 IN
 .500 .000 .000 .000 ZMRP .0000 IN
 .500 .000 .000 .000 SCALE .0040 IN



EFFECT ON ORBITER OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET
 (A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C80041) MSFC 570(IAGIF)(03)/(I9)/(S3/2)/(S3/2)YIE
 (C80043) MSFC 570(IAGIF)(03)/(I9)/(S3/2)/(S3/2)YIE
 (C80002) MSFC 570(IAGIF)(03)/(I9)/(S3/2)/(S3/2)

ORBITING SPACER SPADIA SPAGAP REFERENCE INFORMATION
 .500 9.100 .200 .050 SREF 5.1990 SO.
 .500 13.140 .000 .100 LREF 5.3130
 .500 .000 .000 2.5450 BREF
 .0000 YMRP
 .0000 ZMRP
 .0040 SCALE



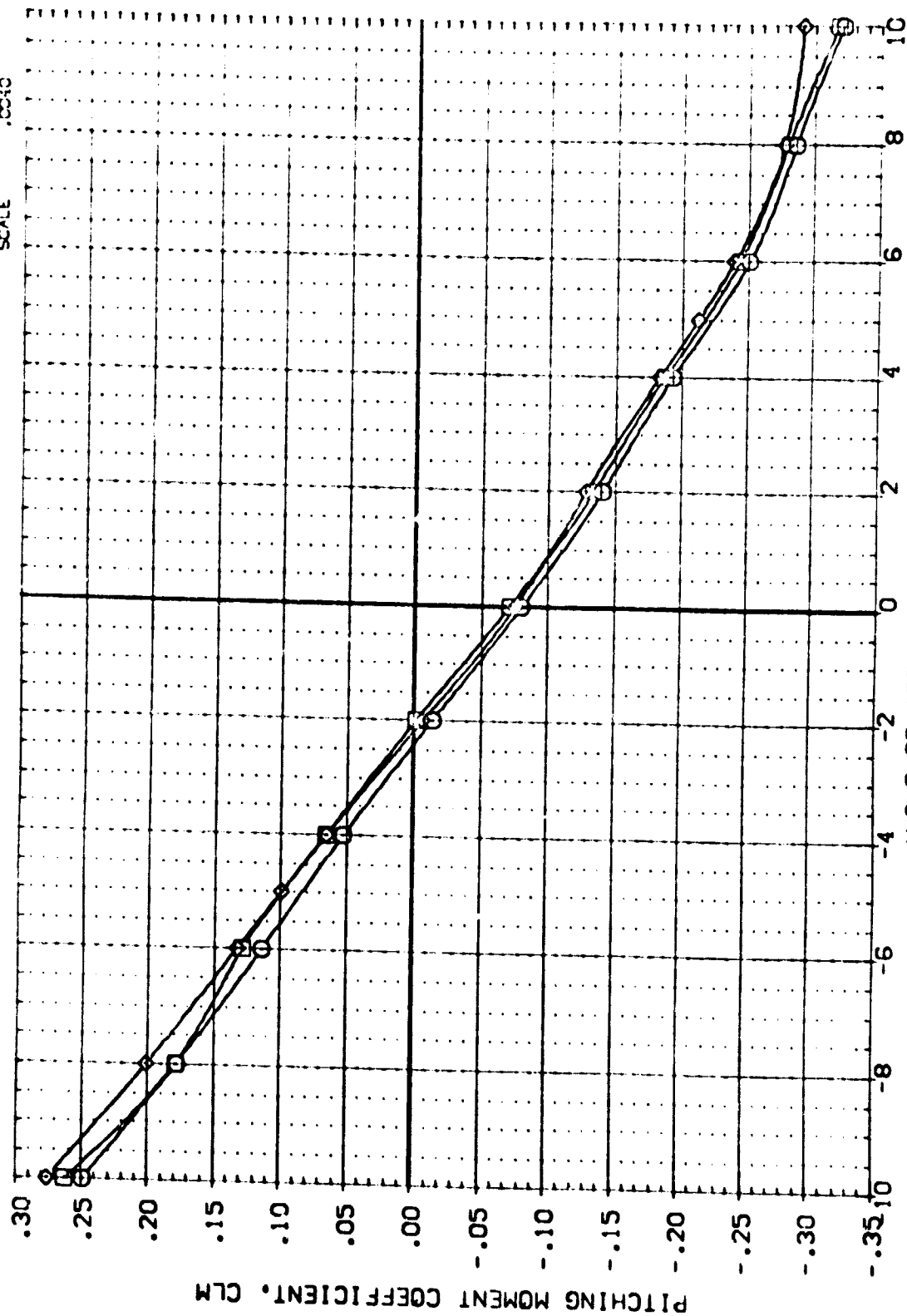
EFFECT ON ORBITER OF SPACER GAP - ATTACHED FLOW AND AFT TO ET

(A)MACH = 1.25

(C8004)		MSFC	S70((A3:F)(C3)/(T9)/(S3/2))	(S3/2)VE
(C8043)		MSFC	S70((A3:F)(C3)/(T9)/(S3/2))	(S3/2)VE
(C8002)		MSFC	S70((A3:F)(C3)/(T9)/(S3/2))	(S3/2)

CRBINC	SPACER	SPADIA	SPAGAP
.500	9.100	.700	.050
.500	13.140	.700	.100
.500	.000	.000	.000

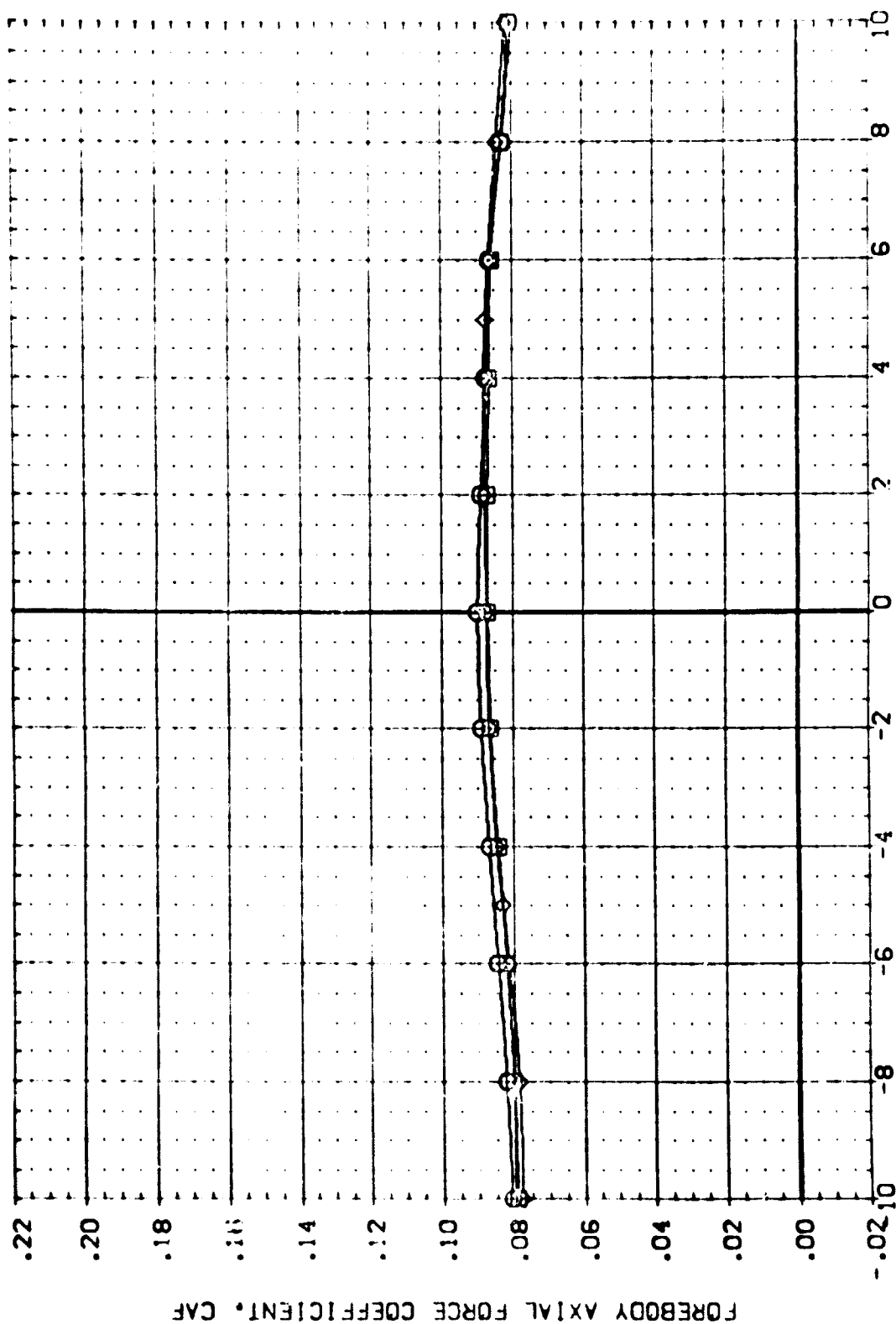
SREF	6.1800	SO
LREF	5.3130	IN
BREF	5.3130	IN
XMPD	2.5450	IN
YMPD	.0000	IN
ZMPD	.0000	IN
SCALE	.0010	



ANGLE OF ATTACK. ALPHA. DEGREES
EFFECT ON ORBITER OF SPACER GAP - ATTACHED FORE AND AFT TO ET

$$[A]_{\text{ACH}} = 1.25$$

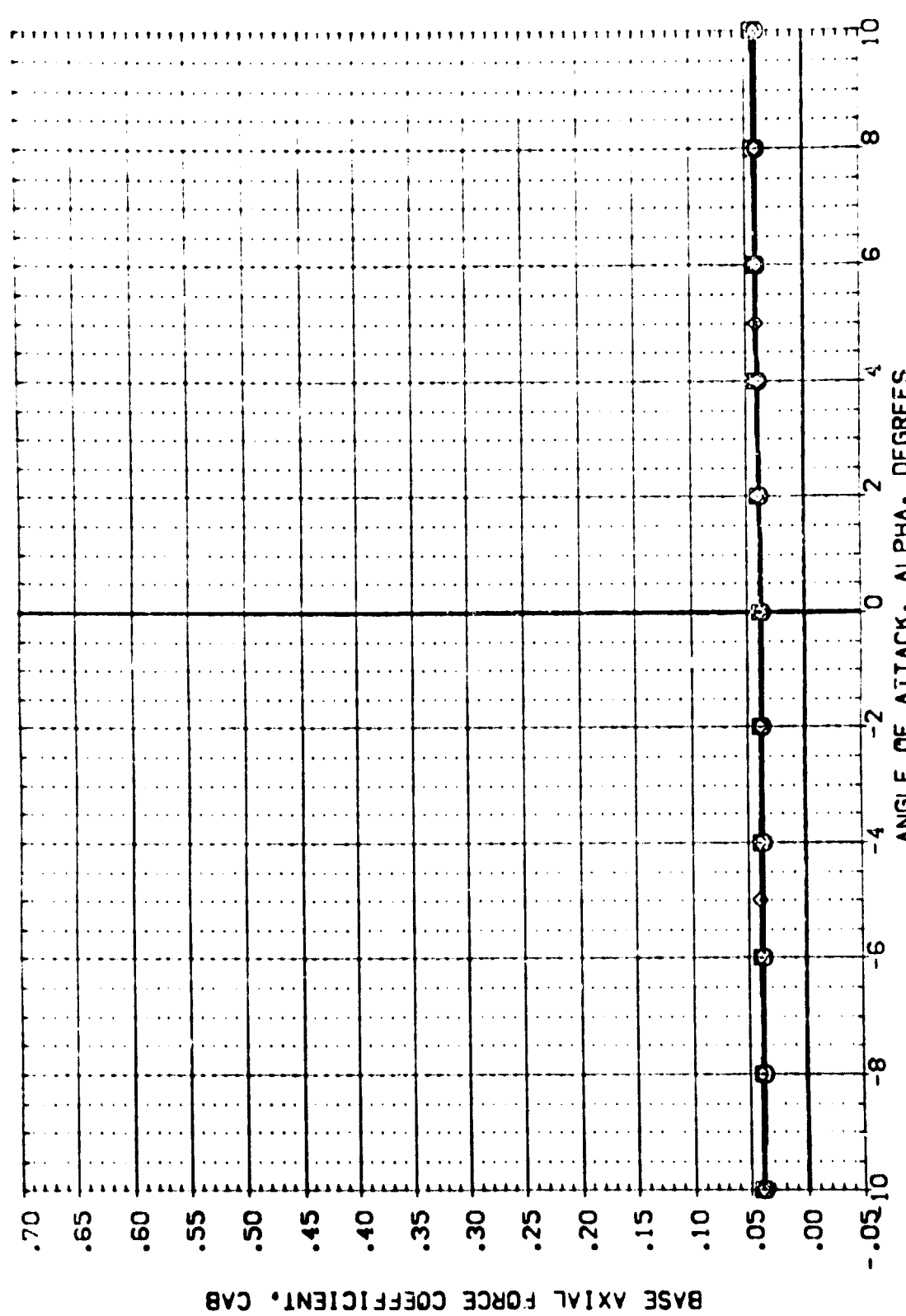
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(080041)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)VIE	.500	9.100	.200	.050	SREF 6.1980
(080042)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)VIE	.500	13.140	.200	.100	LREF 5.3130
(080002)	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)	.500	.000	.000	.000	BREF 5.3130
						XMRP 2.5490
						YMRP .0000
						ZMRP .0000
						SCALE .0010



EFFECT ON ORBITER OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADT	SPAGAP	REFERENCE INFORMATION
Q	MSFC 570(A3/F)(C3)/(I9)/(S3/2)/(S3/2)YIE	.500	9.100	.200	.050	SRFF 6.1980
X	MSFC 570(A3/F)(C3)/(I9)/(S3/2)/(S3/2)YIE	.500	13.140	.200	.100	LRFF 5.3130
					.000	BRFF 5.3130
						YMRP 2.5450
						YMRP .0000
						YMRP .0000
						SCALE .0000
						SCALE .0000



EFFECT ON ORBITER OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (C80041) (C80043) (C80002)

CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)YIE MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)YIE MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)

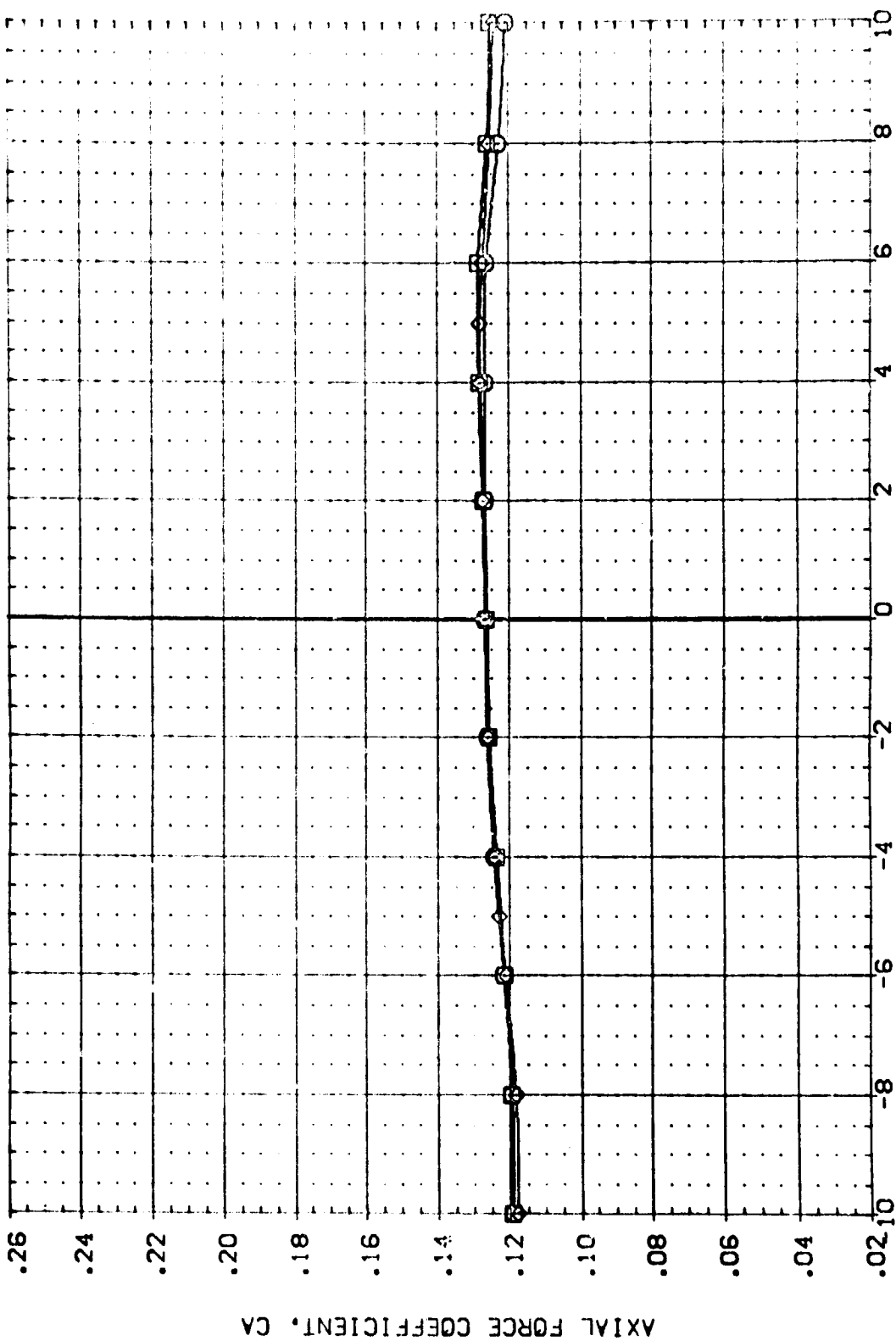
ORBITING: .500 .500 .500

SPACER: 9.100 13.140 .000

SPADIA: .200 .200 .000

SPAGAP: .050 .100 .000

REFERENCE INFORMATION: SREF 6.1980 SO: 1N LREF 5.3130 ZREF 5.3130 XMRP 2.5490 YMRP .0000 ZMRP .0000 SCALE .0010

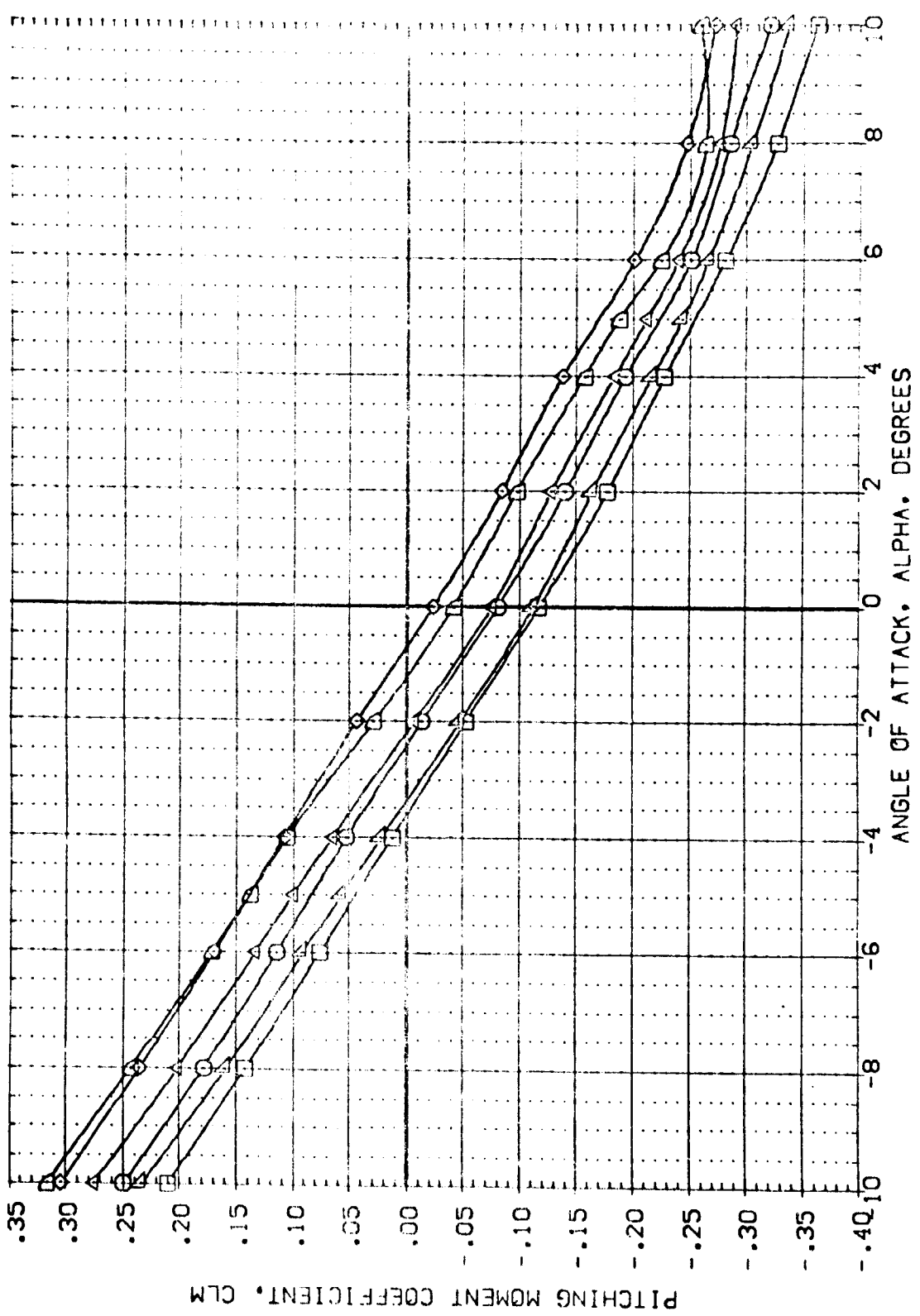


EFFECT ON ORBITER OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(C83041)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	.500	.140	.200	.050	G.1980
(C83044)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	5.3130
(C83045)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	-1.500	.140	.200	.050	5.3130
(D83002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	.500	.140	.000	.000	2.5480
(D83003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	1.500	.140	.000	.000	.0000
(D83001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)	-1.500	.140	.000	.000	.0000

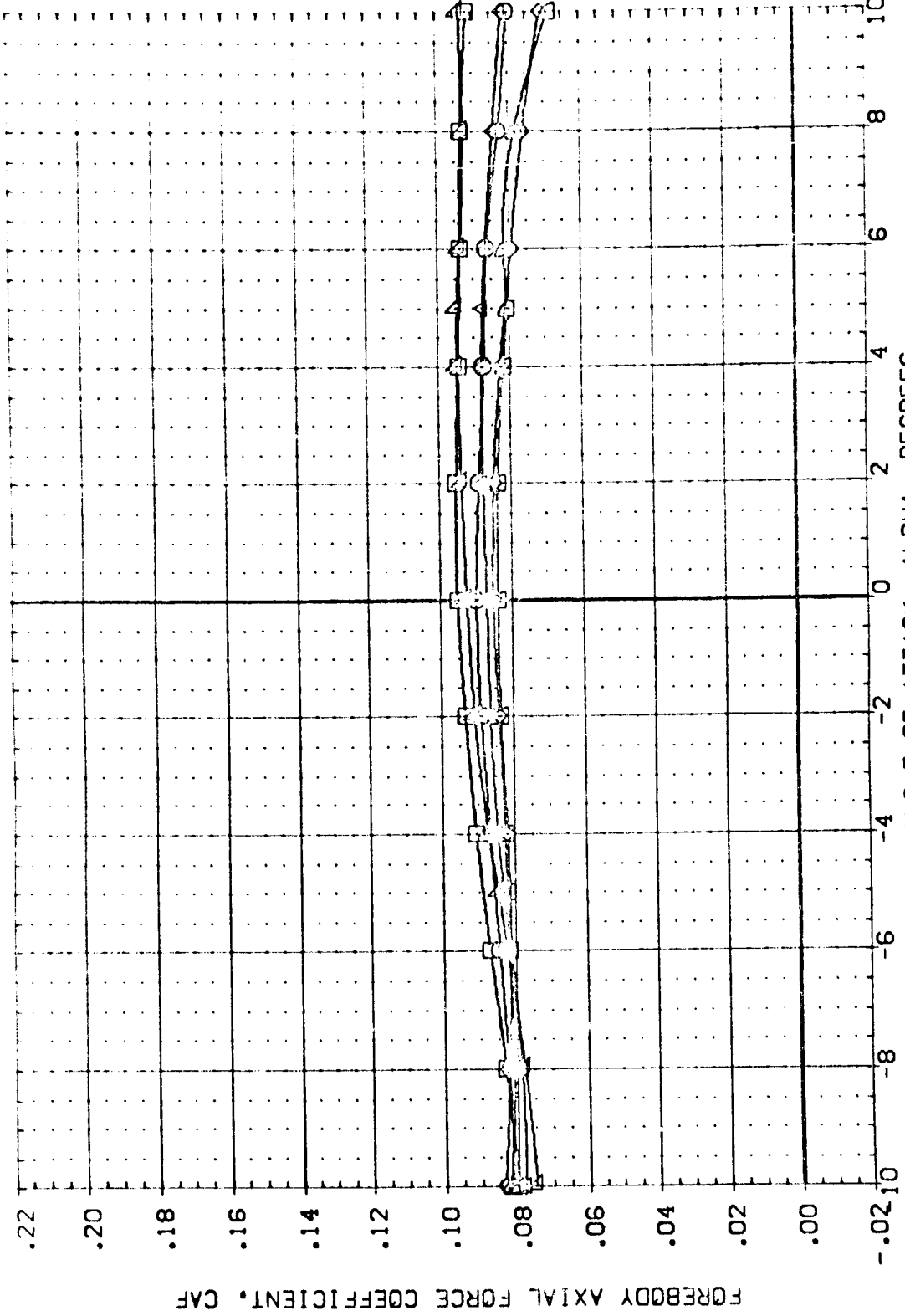
SCALE .0010



EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITER DUE TO	SPACER DIA	SPACER DIA	REFERENCE INFORMATION
082041	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082042	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082043	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082044	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082045	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082046	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082047	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082048	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082049	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082050	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082051	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082052	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082053	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082054	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082055	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082056	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082057	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082058	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082059	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082060	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082061	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
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082078	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
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082098	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082099	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000
082100	5701/33/31/33/33/33	0.00	0.00	0.00	5.1000



EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

CAD MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION	SO. IN
(083041)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	SREF	6.1980
(083044)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	LREF	5.3130
(083045)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	BREF	5.3130
(083002)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	YREF	2.5460
(083003)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	YREF	.0000
(083001)	MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)YIE	1.500	.140	.200	.050	ZREF	.0000
						SCALE	.0010

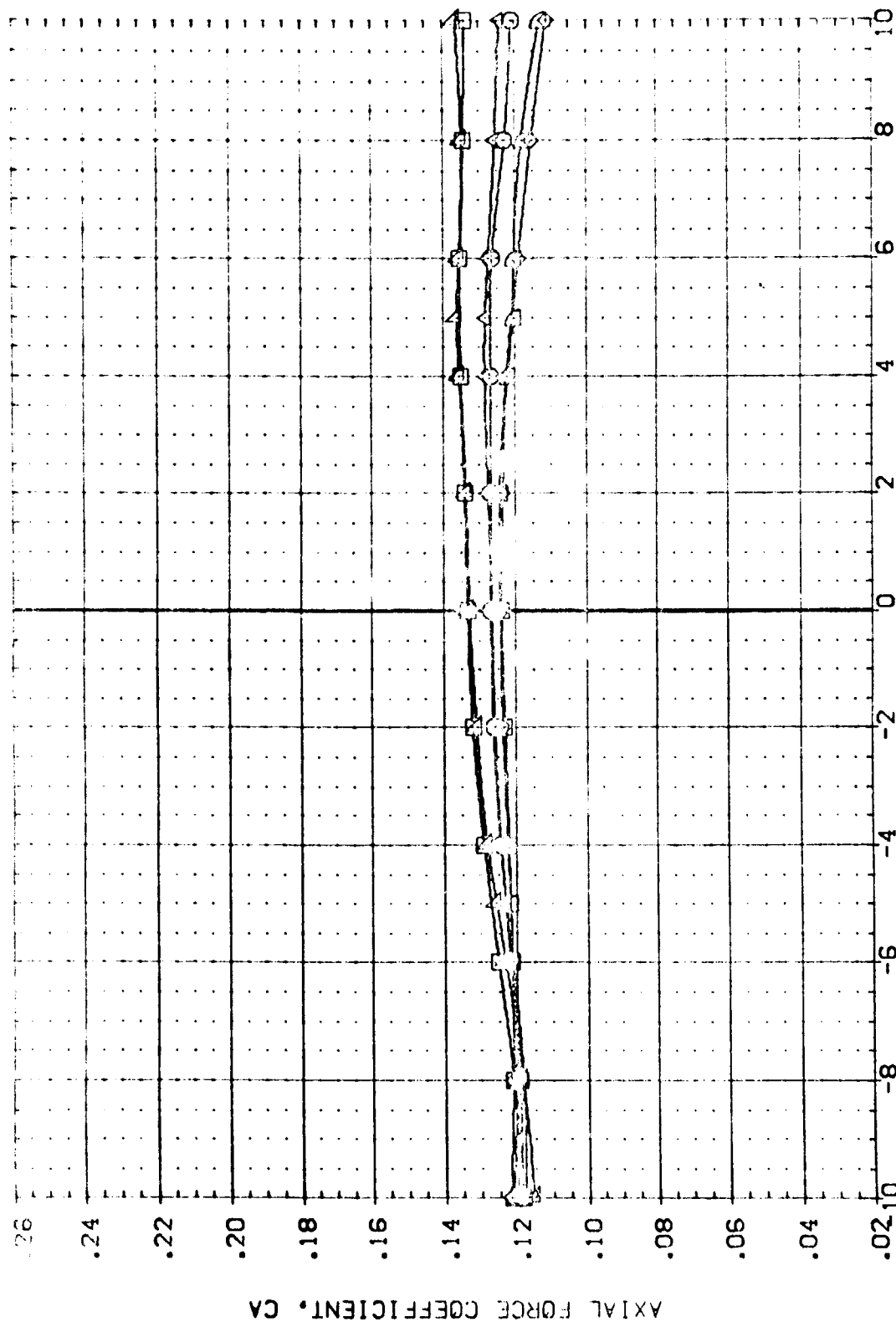


EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

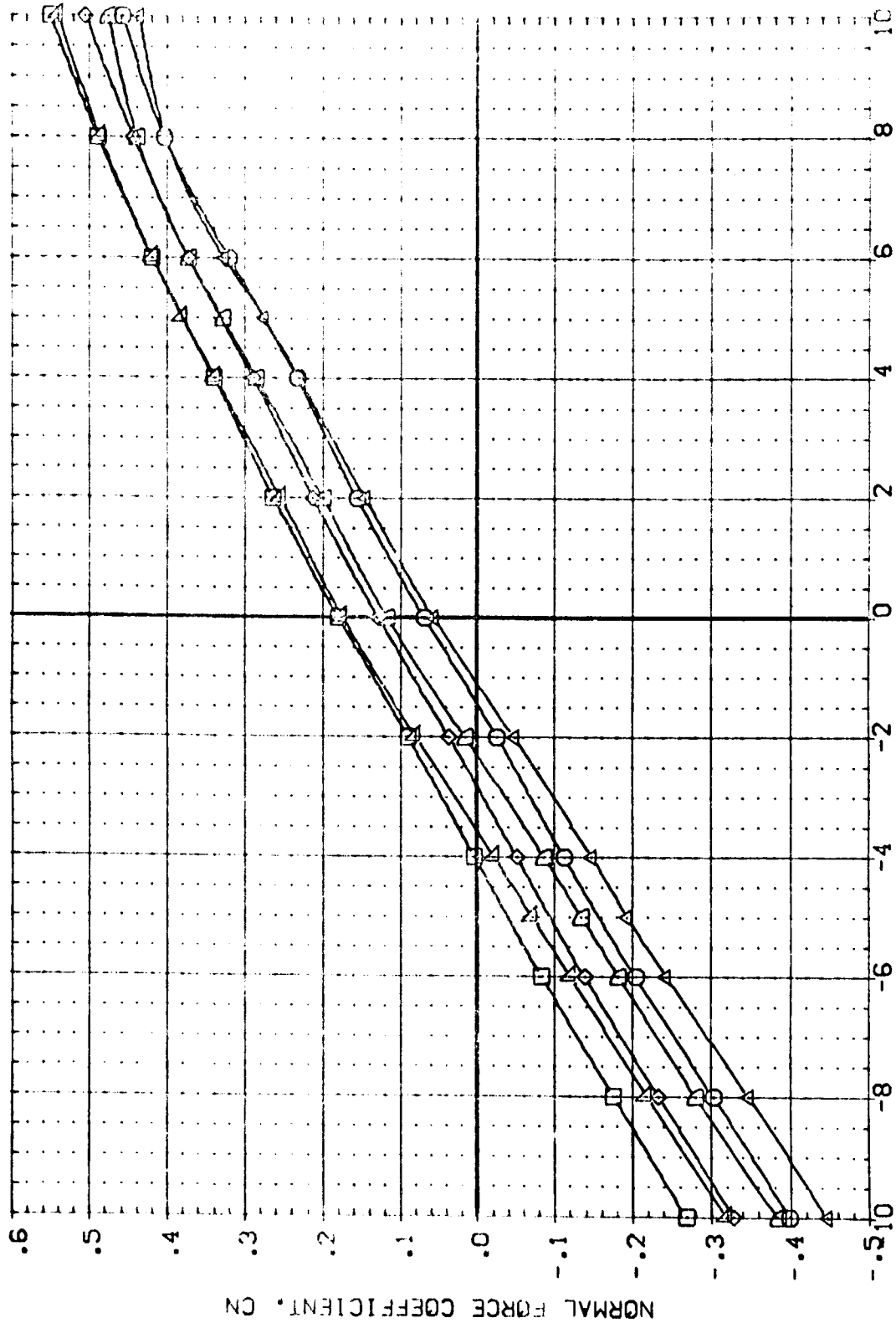


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EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

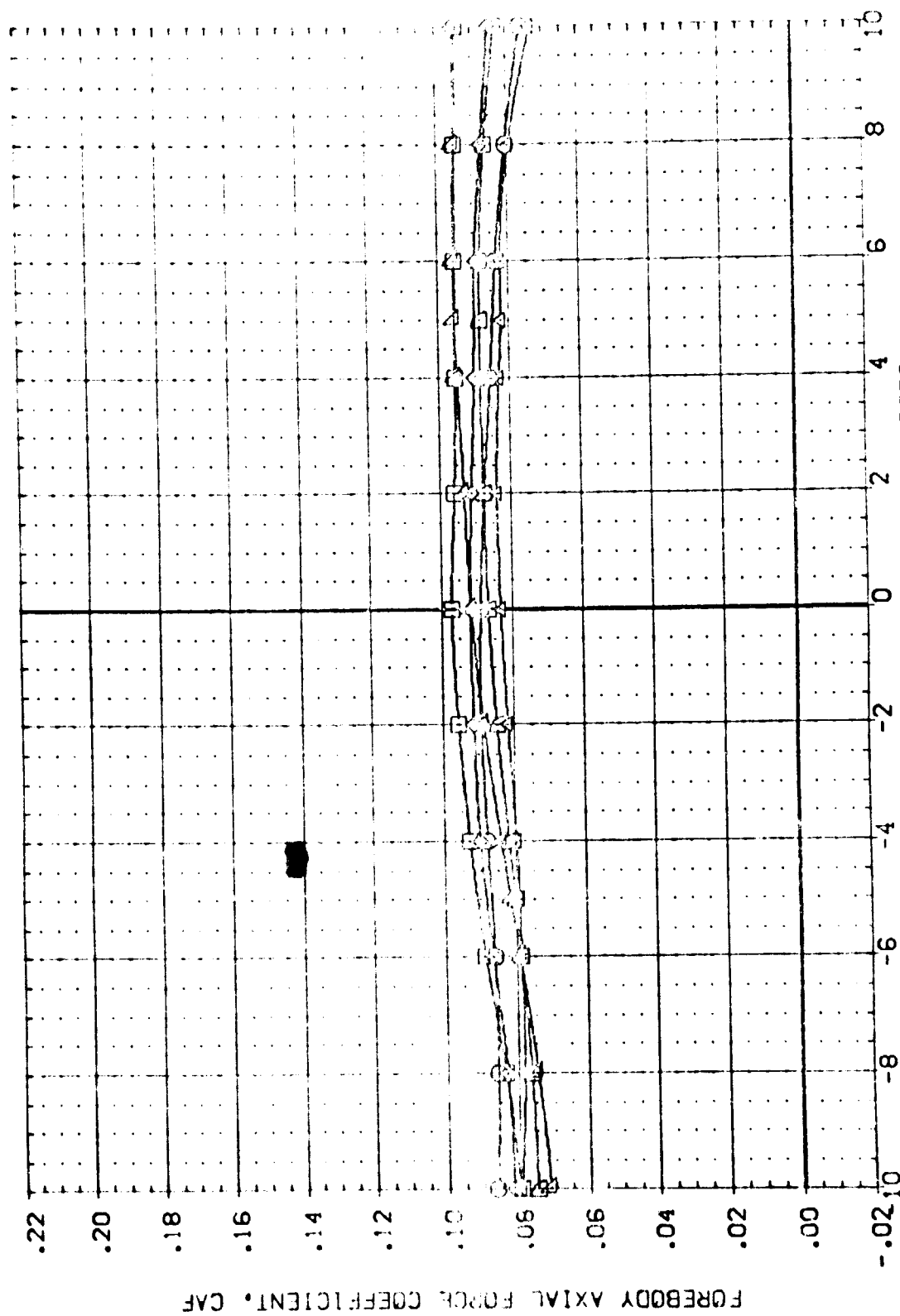
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(D83046)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	-500	.280	.200	.050	SREF 6.1980
(D83047)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	1500	.280	.200	.050	LREF 5.3130
(D83048)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	500	.280	.200	.050	BREF 5.3130
(D83004)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	-500	.280	.000	.000	XM-SP 2.5490
(D83005)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	1500	.280	.000	.000	YM-SP .0000
(D83006)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	500	.280	.000	.000	ZM-SP .0000
(D83007)	MSFC 570(A31F)(03)/(T9)/(S3/2)/(S3/2)YIE	1500	.280	.000	.000	SCALE .0040



EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A) $\gamma = 1.25$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(DB3046)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	-500	.280	.200	.050	SREF 6.1990
(DB3047)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	1.500	.280	.200	.050	LREF 5.3130
(DB3048)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	-500	.280	.200	.050	BREF 2.5400
(DB3049)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	1.500	.280	.200	.050	XMRP .0000
(DB3050)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	-500	.280	.200	.050	YMRP .0000
(DB3051)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	1.500	.280	.200	.050	ZMRP .0000
(DB3052)	MSFC 5701(A31F)(03)/(19)/(S3/2)/(S3/2)1VIE	-500	.280	.200	.050	SCALE .0010



EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

DATA SET SYMBOL CONFIGURATION DESCRIPTION ORBIT INC DELTA Z SPADIA SPAGAP REFERENCE INFORMATION SQ. IN

083046 MSFC 570(A3/E)(03)/(19)/(53/2)/(53/2)VE 1.500 .790 .200 .050 SPREF 6.1990

083047 MSFC 570(A3/E)(03)/(18)/(53/2)/(53/2)VE 1.500 .280 .200 .050 LPREF 5.3130

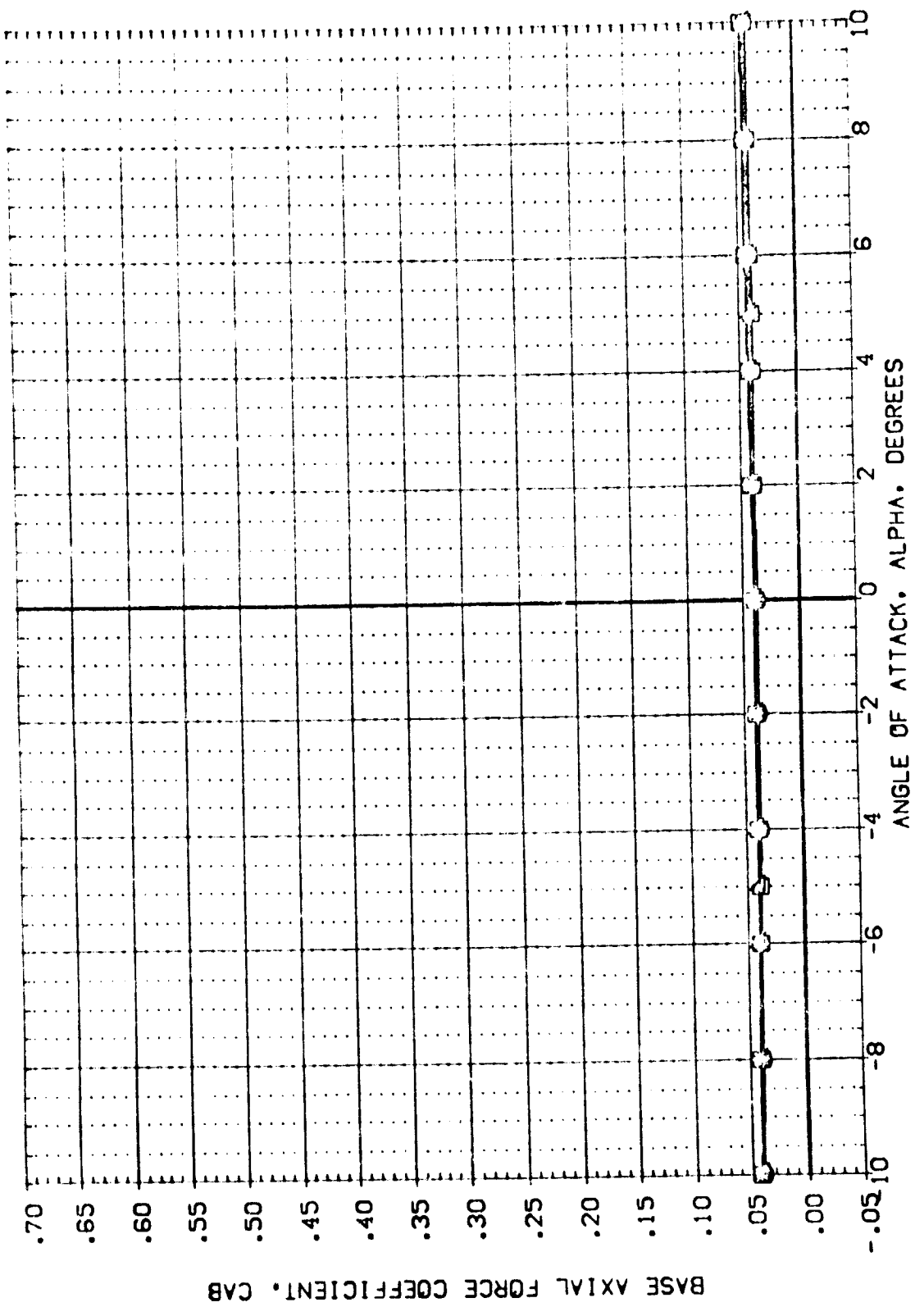
083048 MSFC 570(A3/E)(03)/(9)/(53/2)/(53/2)VE 1.500 .280 .200 .050 BRPF 5.3130

083049 MSFC 570(A3/E)(03)/(9)/(53/2)/(53/2)VE 1.500 .200 .000 .000 XMRP 2.5490

083050 MSFC 570(A3/E)(03)/(9)/(53/2)/(53/2)VE 1.500 .200 .000 .000 YMRP .0000

083051 MSFC 570(A3/E)(03)/(9)/(53/2)/(53/2)VE 1.500 .280 .000 .000 ZMRP .0000

083055 MSFC 570(A3/E)(03)/(9)/(53/2)/(53/2)VE 1.500 .280 .000 .000 SCALE .0040

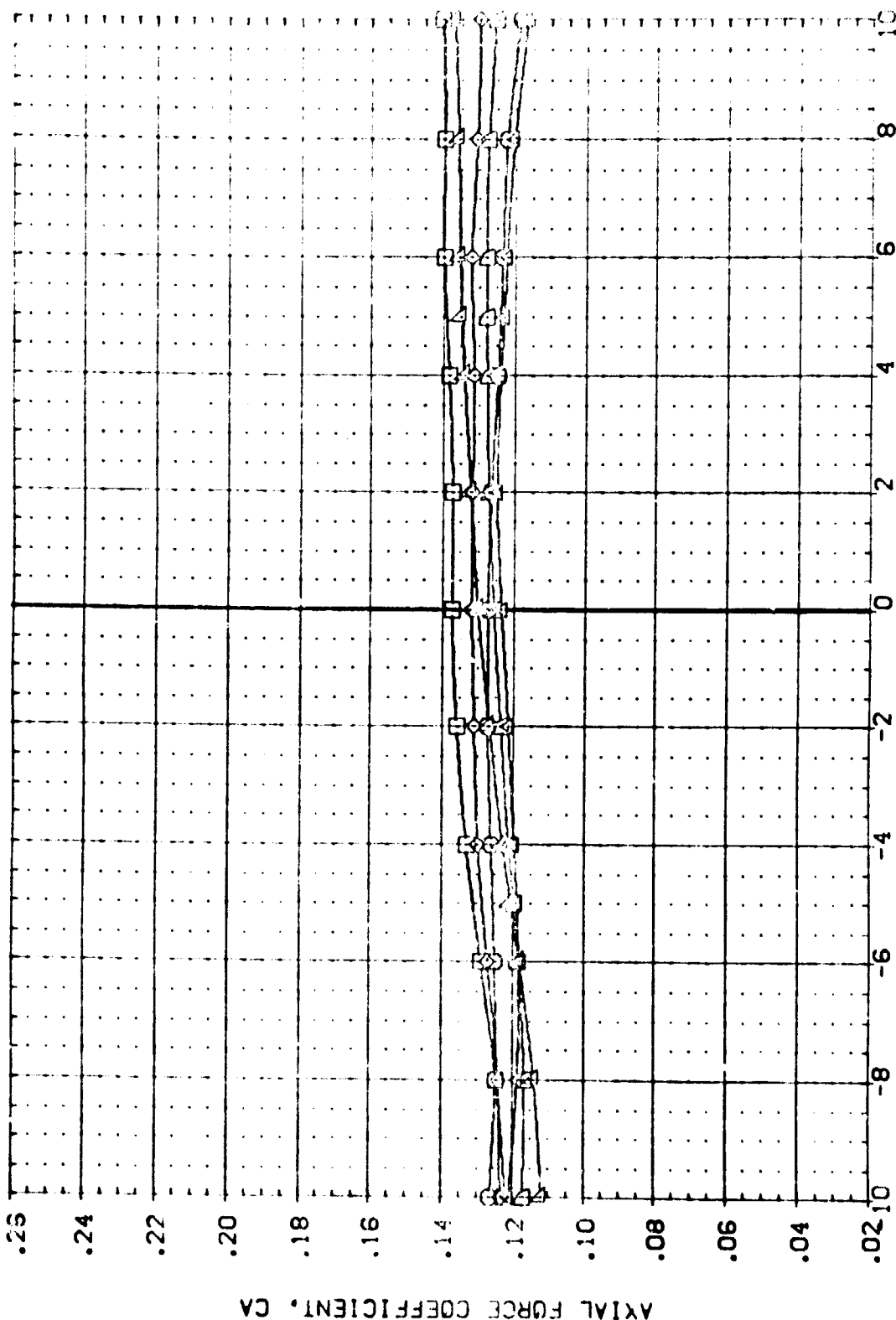


EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A) MACH = 1.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
DB3046	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	.280	.200	.050	SREF 6.1980 SQ. IN
DB3047	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	LREF 5.3130 SQ. IN
DB3048	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	.280	.200	.050	BREF 5.3130 SQ. IN
DB3049	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	.500	.280	.200	.050	XREF 2.5400 SQ. IN
DB3050	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	YREF .0000 SQ. IN
DB3051	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	ZREF .0000 SQ. IN
DB3052	MSFC 570(A31F)(03)/(19)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	SCALE .0040



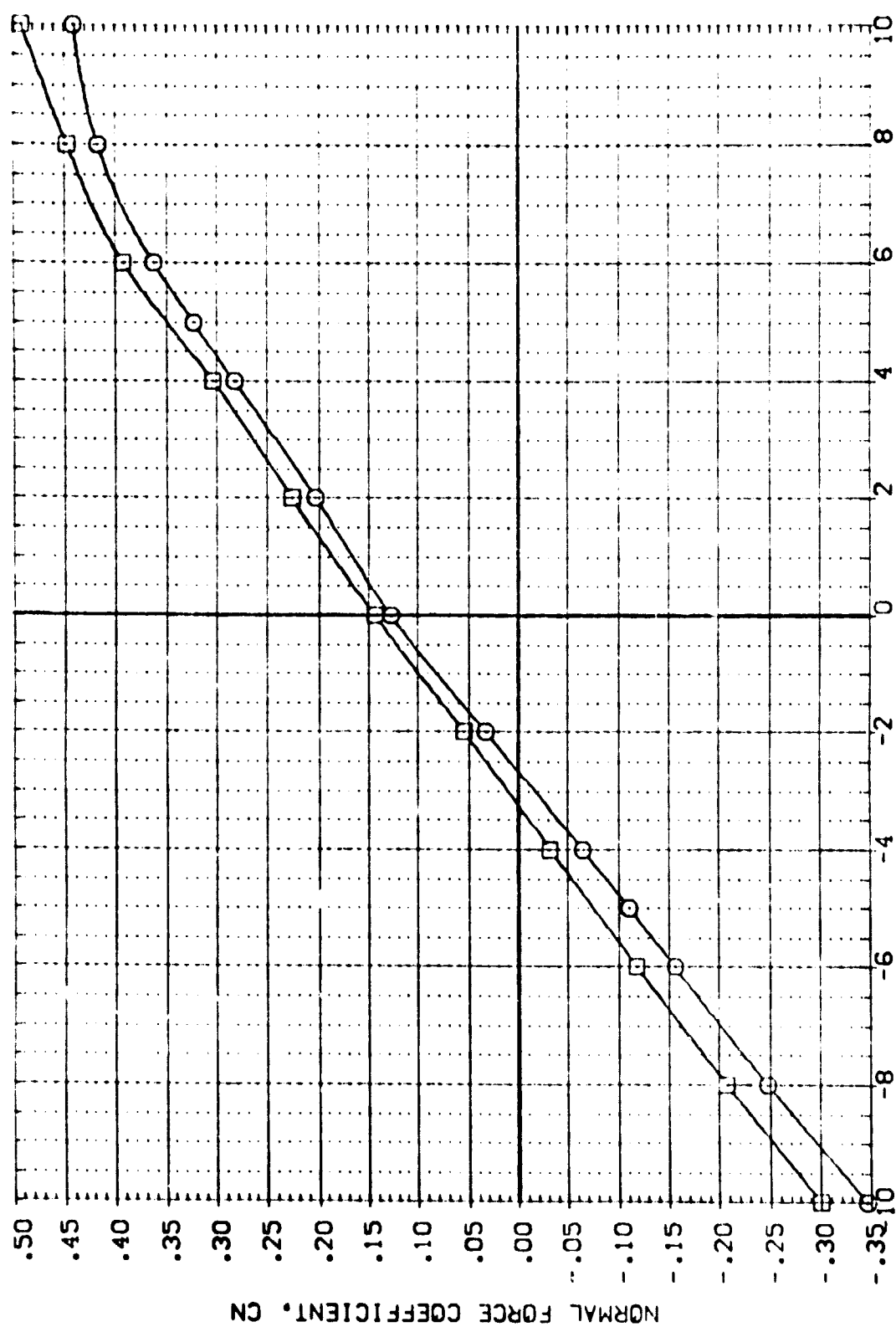
EFFECT ON ORBITER OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083002) MSFC STD ((A31F)(S3)/(T9)/(S3/2)/(S3/2)
 (083005) MSFC STD ((A31F)(S3)/(T9)/(S3/2)/(S3/2)Y3E

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .100 .050

REFERENCE INFORMATION
 SREF 6.1000 SO 7
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0010



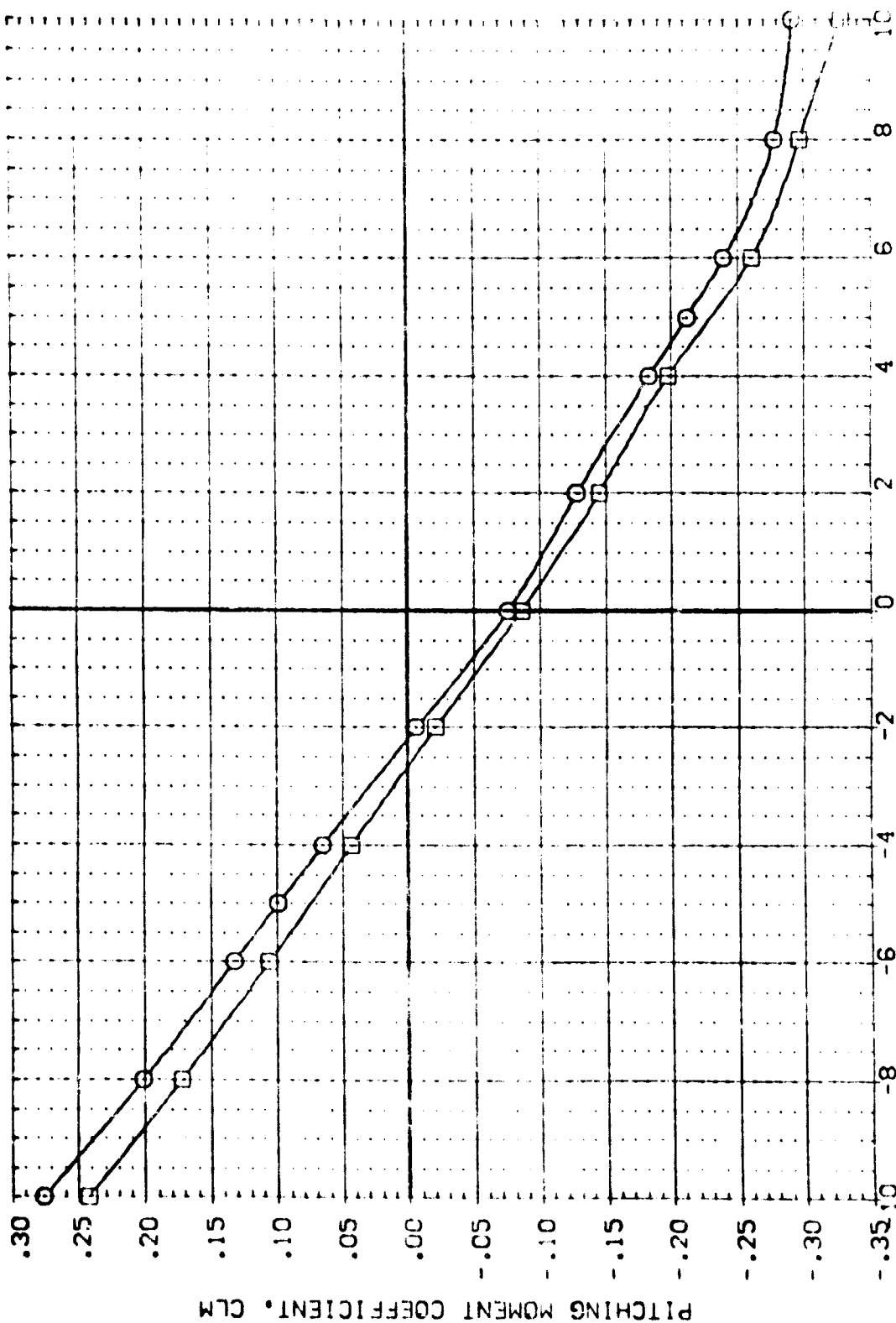
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: DB3002 (DB3005)
 COV: 100%
 DESCRIPTION: MSFC 570(1A31F)(03)/(19)/(53/2) MSFC 570(1A31F)(03)/(19)/(53/2) V/E

ORBITING: .500
 SPACER: .000
 SPADIA: .000
 SPAGAP: .000

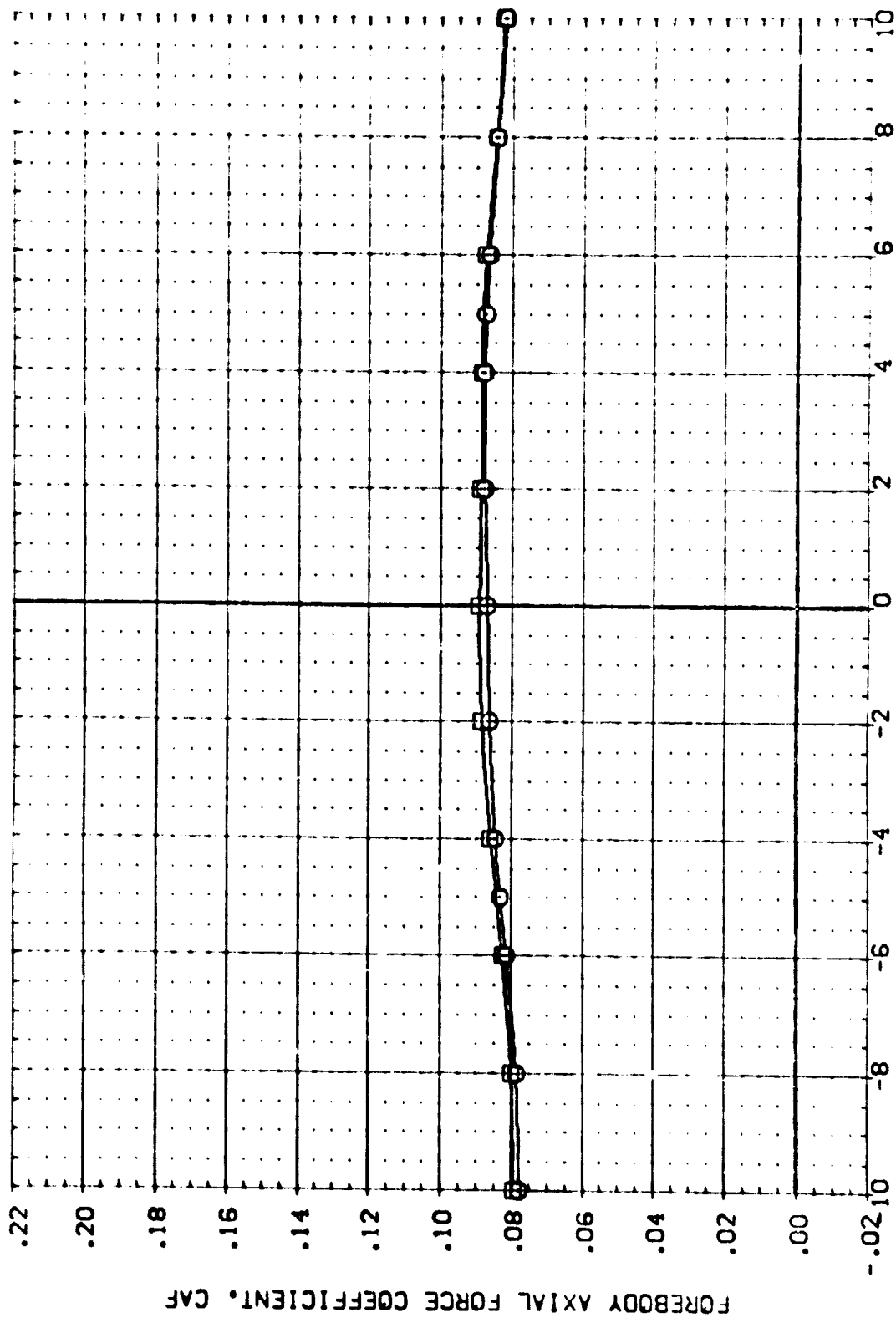
REFERENCE INFORMATION:
 SREF: 6.1980
 LREF: 5.3130
 BREF: 5.3130
 YMAP: 2.5490
 ZMAP: .0000
 SCALE: .0010



EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

(CLM)MACH = 0.25

REFERENCE INFORMATION:	
SREF	6.190
LOEF	5.330
BOEF	5.330
XMRP	5.400
YMRP	.000
ZMRP	.000
SCALE	.0010



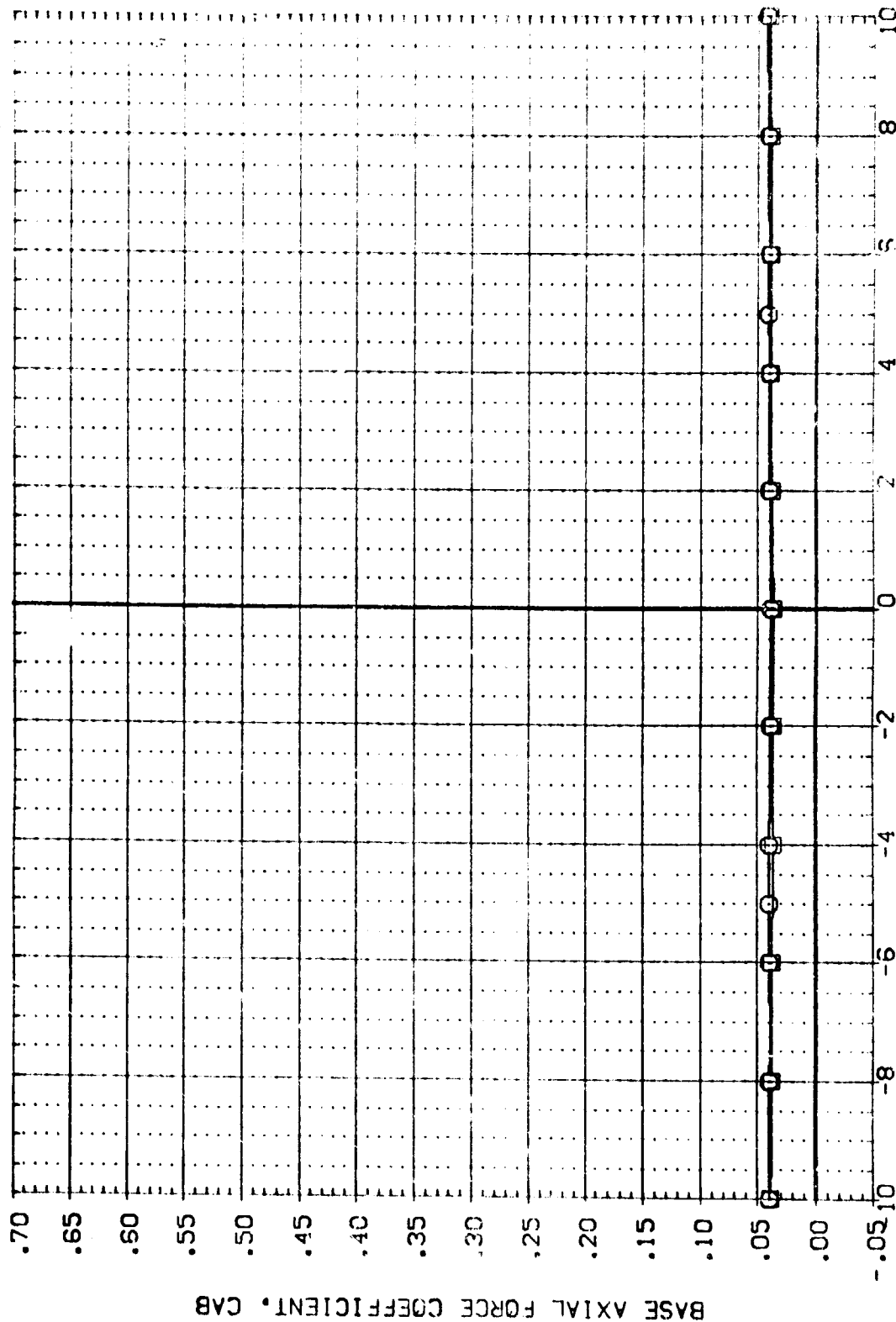
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

$$\text{CARMACH} = 1.25$$

DATA SET SYMBOL CONFIGURATION DESCRIPTION
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 (080051) ☐ MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)XZ

ORBITAL SPACER SPADIA SPAGAP
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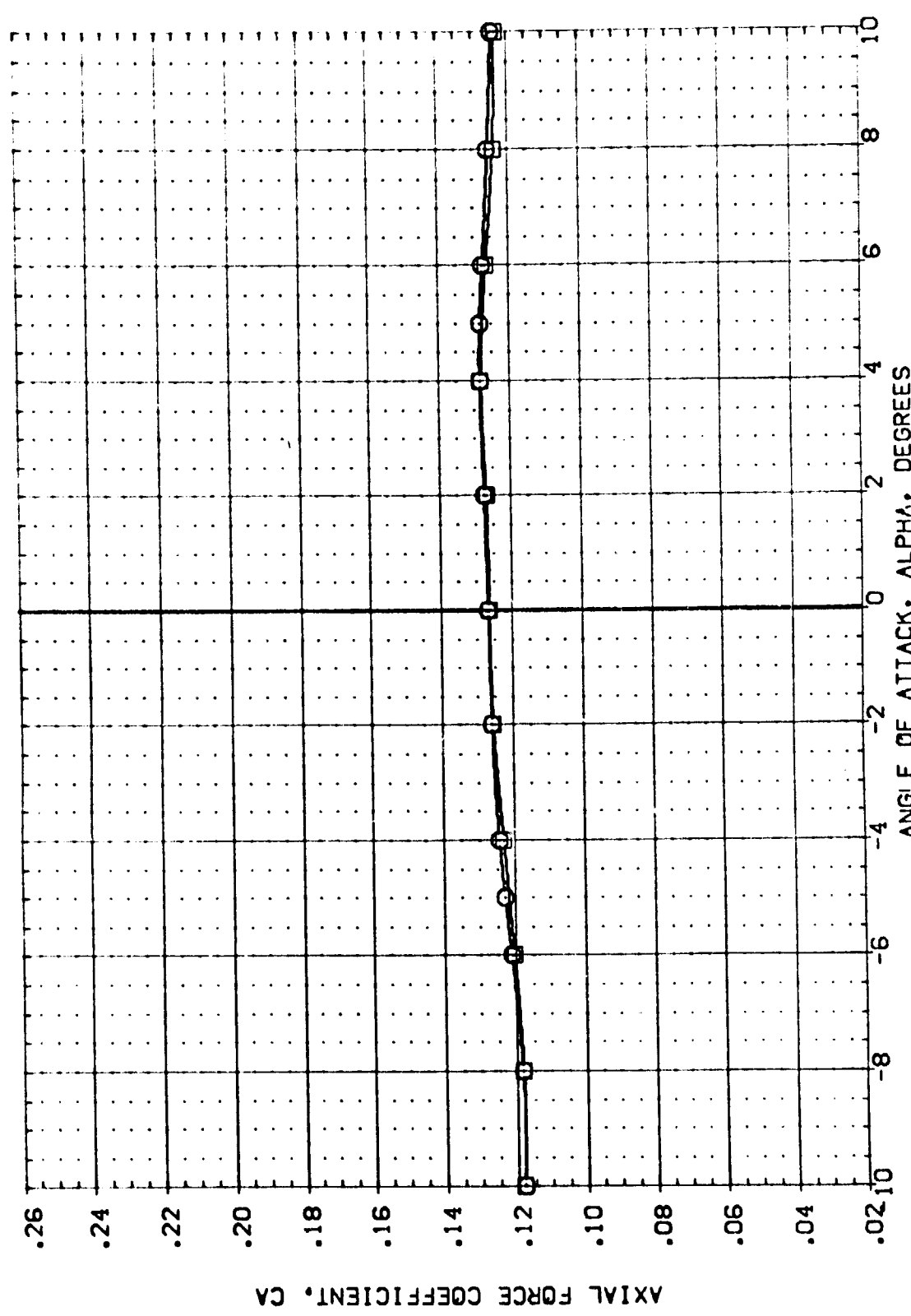
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 BREF 5.3130 IN.
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 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

CAJ MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
[083002:]	MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)
[083005:]	MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)Y3E



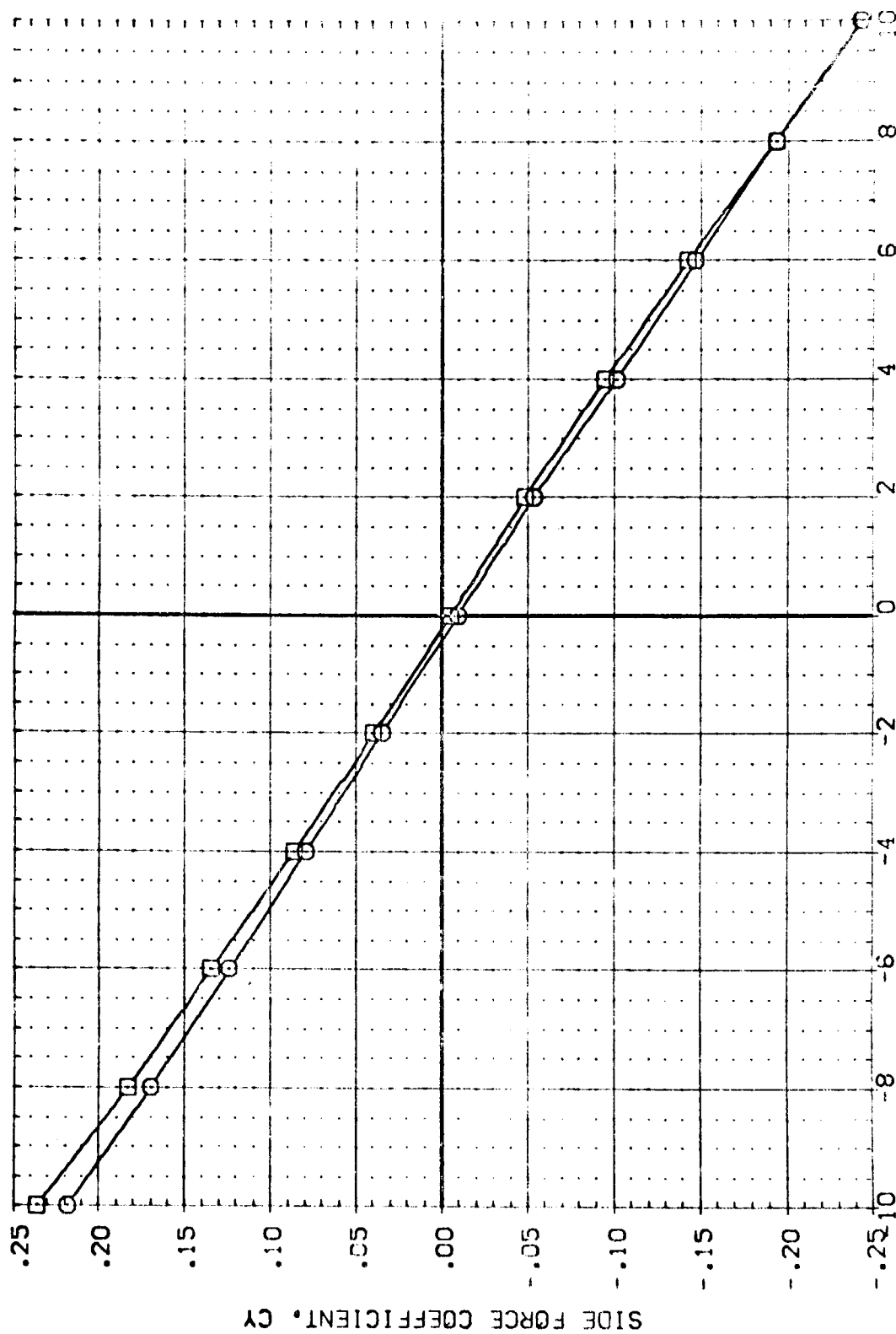
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

$$C_A \text{MACH} = 1.25$$

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (A83049) MSFC 570((A31F)(03)) / ((19)) / ((S3/2)) / ((S3/2)) / ((S3/2)) / ((S3/2))
 (D83007) MSFC 570((A31F)(03)) / ((19)) / ((S3/2)) / ((S3/2)) / ((S3/2)) / ((S3/2))

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .000 .000

REFERENCE INFORMATION
 SREF 6.1980 IN.
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5450 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010

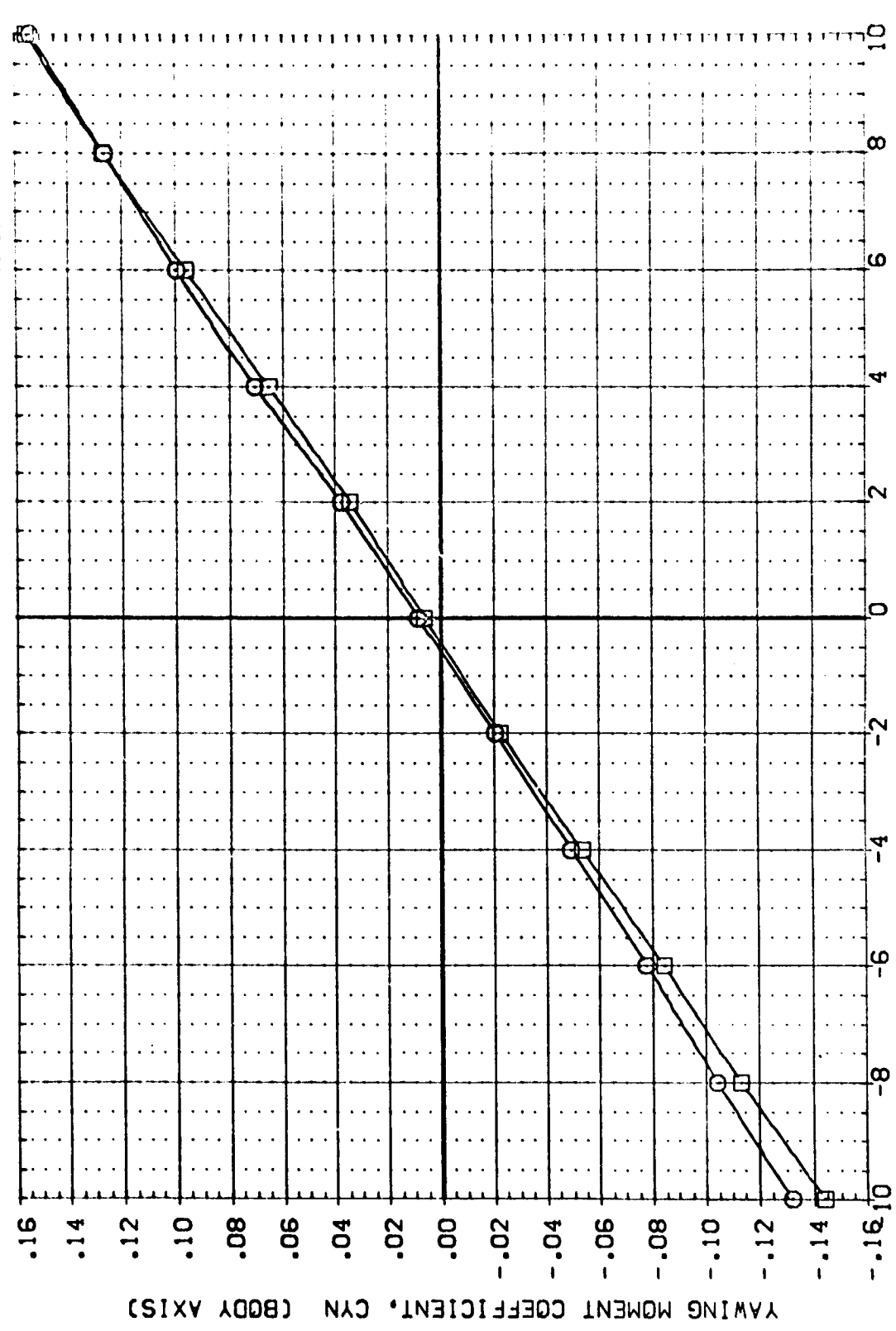


SIDESLIP ANGLE, BETA, DEGREES

EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(A83049)	MSFC 570((A31F)(03)/(T9)/(S3/2)/(S3/2))Y1E	.500	.000	.200	.000	SREF 5.1980
(083007)	MSFC 570((A31F)(03)/(T9)/(S3/2)/(S3/2))	.500	.000	.000	.000	LREF 5.3130
						BREF 5.3130
						YMRP 2.5490
						ZMRP .0000
						SCALE .0010



SIDESLIP ANGLE, BETA, DEGREES

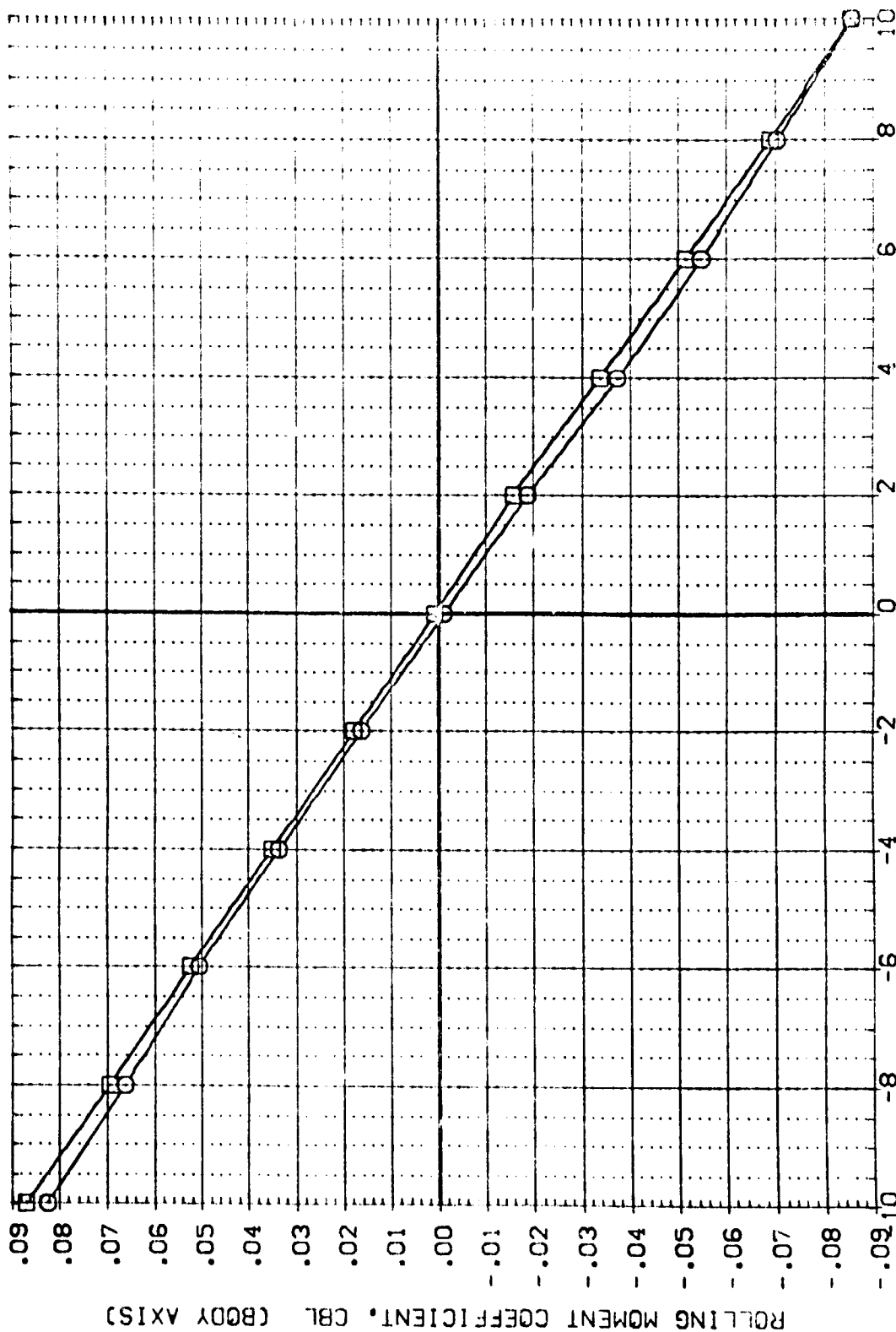
EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.26

DATA SET SYMBOL: (A83049) (DB3007)
 CONFIGURATION DESCRIPTION:
 MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])
 MSFC 570([A31F])(03)/([T9])/([S3/2])/([S3/2])

ORBITAL: .500
 SPACER: 9.100
 SPADIA: .200
 SPAGAP: .050
 .000

REFERENCE INFORMATION:
 SREF: 6.1980
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5450
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

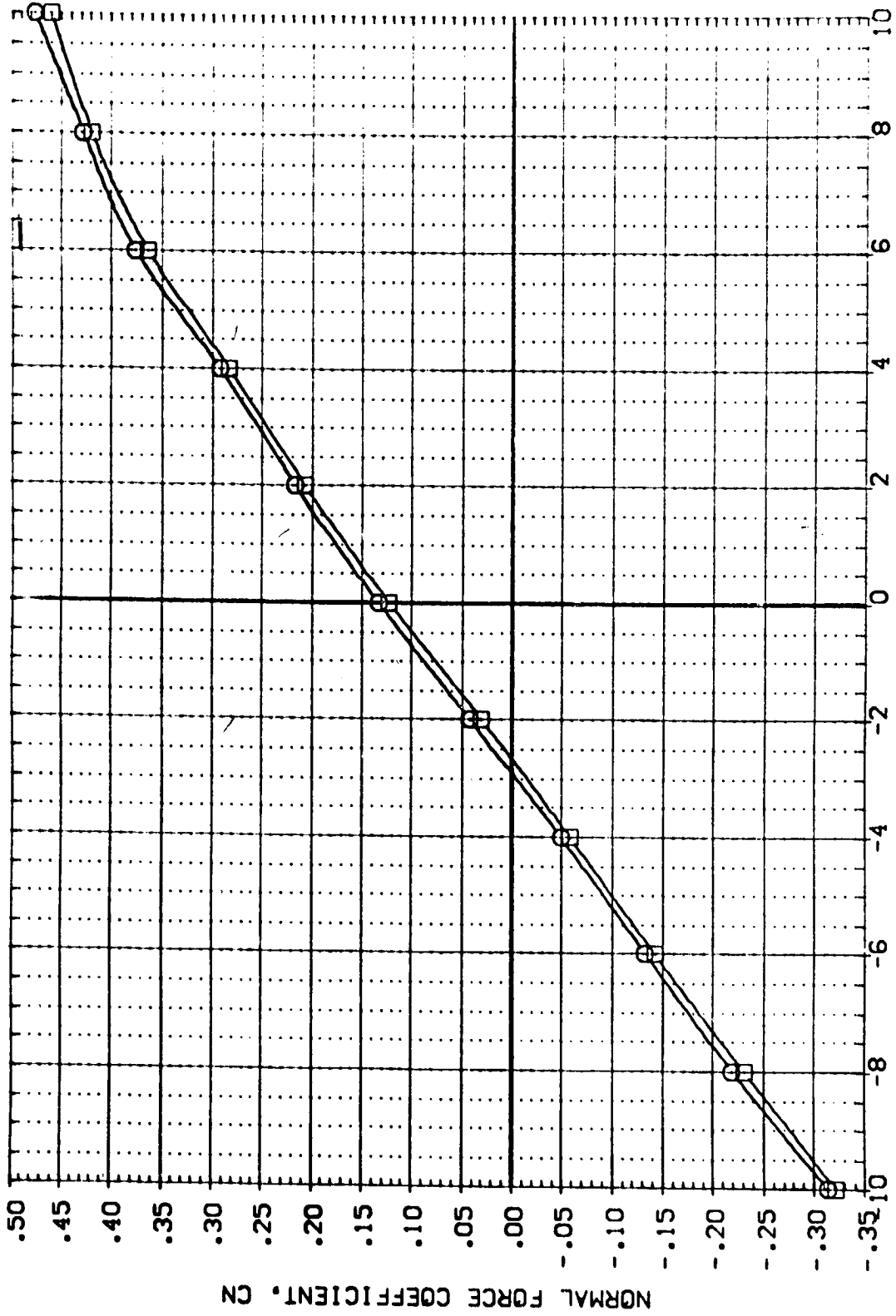
(080041) MSFC 5701(A31F)(03)/(19)/(S3/2)Y1E
(080050) MSFC 5701(A31F)(03)/(19)/(S3/2)Y1EG

ORBITING SPACER SPADIA SPAGAP

.500 .200 .050
.500 .200 .050

REFERENCE INFORMATION

SREF 6.1980 SG. IN
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040



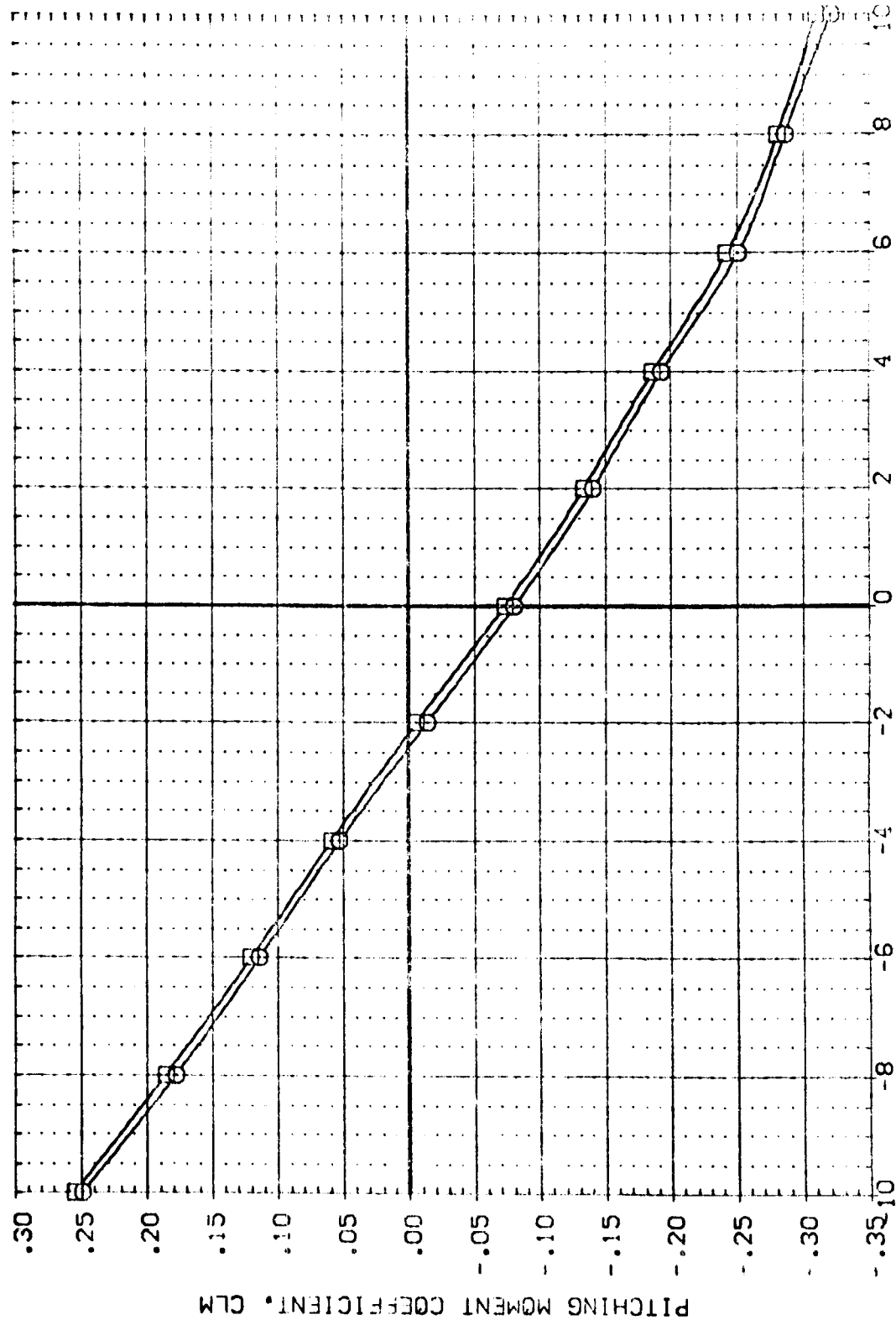
EFFECT ON ORBITER OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (C80041) (C80050) CONFIGURATION DESCRIPTION: MSFC 570((A31F)(03)/(19)/(S3/21)/(S3/21)VIE MSFC 570((A31F)(03)/(19)/(S3/21)/(S3/21)VIEg

ORBITING: .500 .500 SPACER: 9:100 9:100 SPADIA: .200 .200 SPAGAP: .050 .050

REFERENCE INFORMATION: SREF: 6:1980 S3: IN LREF: 5:3130 N: ZREF: 5:3130 Z: XMRP: 5:5490 YMRP: .0000 ZMRP: .0000 SCALE: .0040



ANGLE OF ATTACK, ALPHA, DEGREES

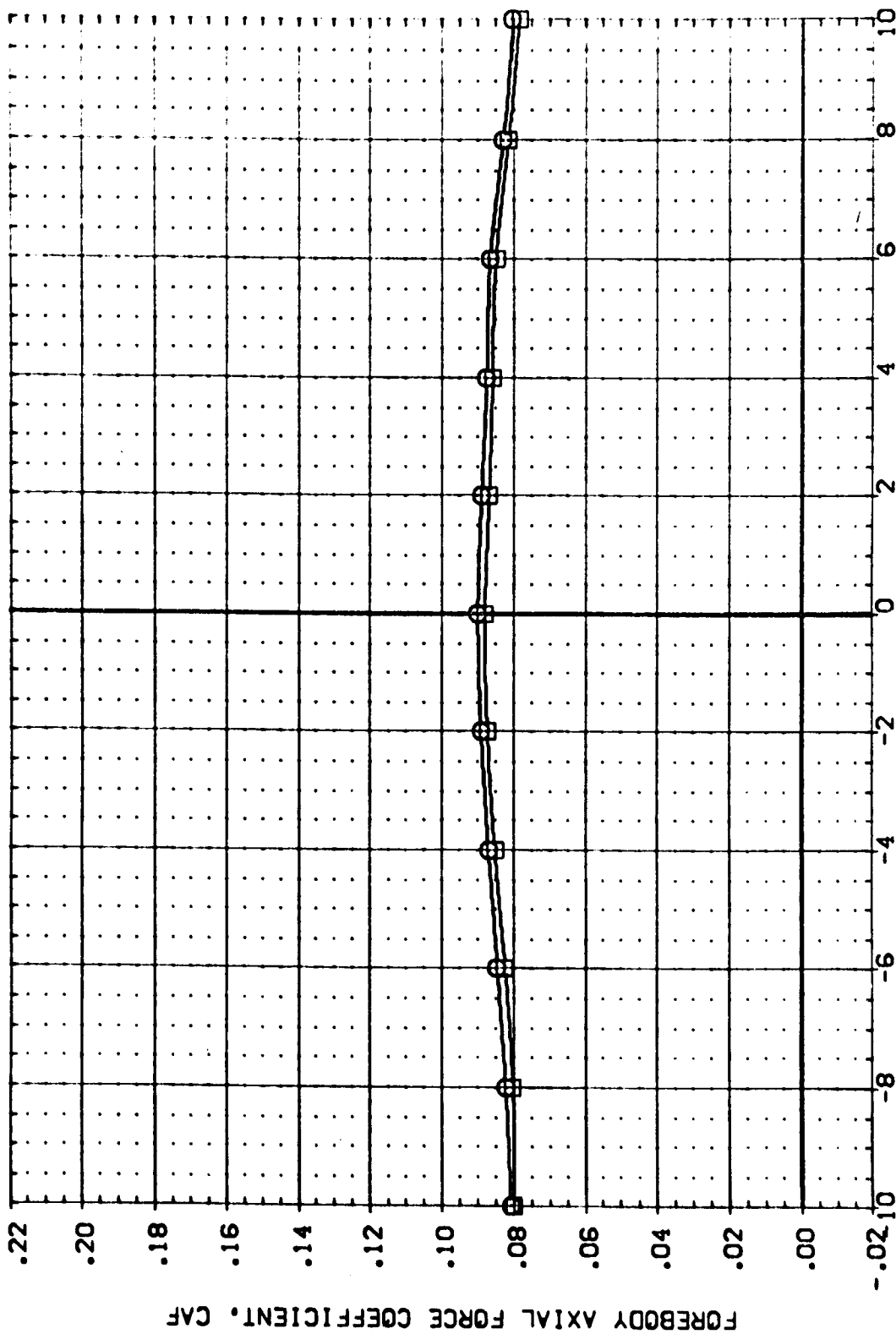
EFFECT ON ORBITER OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

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DATA SET SYMBOL: (C80041) (C80050) CONFIGURATION DESCRIPTION: H5FC 570((I31F)(03))/((T9)/((S3/2)/(S3/2)YIE H5FC 570((I31F)(03))/((T9)/((S3/2)/(S3/2)YIEG

ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION			
.500	9.100	.200	.050	SREF	6.1980	SO:	IN
.500	9.100	.200	.050	LREF	5.3130	IN:	IN
				BREF	5.3130	IN:	IN
				XMRP	2.5450	IN:	IN
				YMRP	.0000	IN:	IN
				ZMRP	.0000	IN:	IN
				SCALE	.0010		



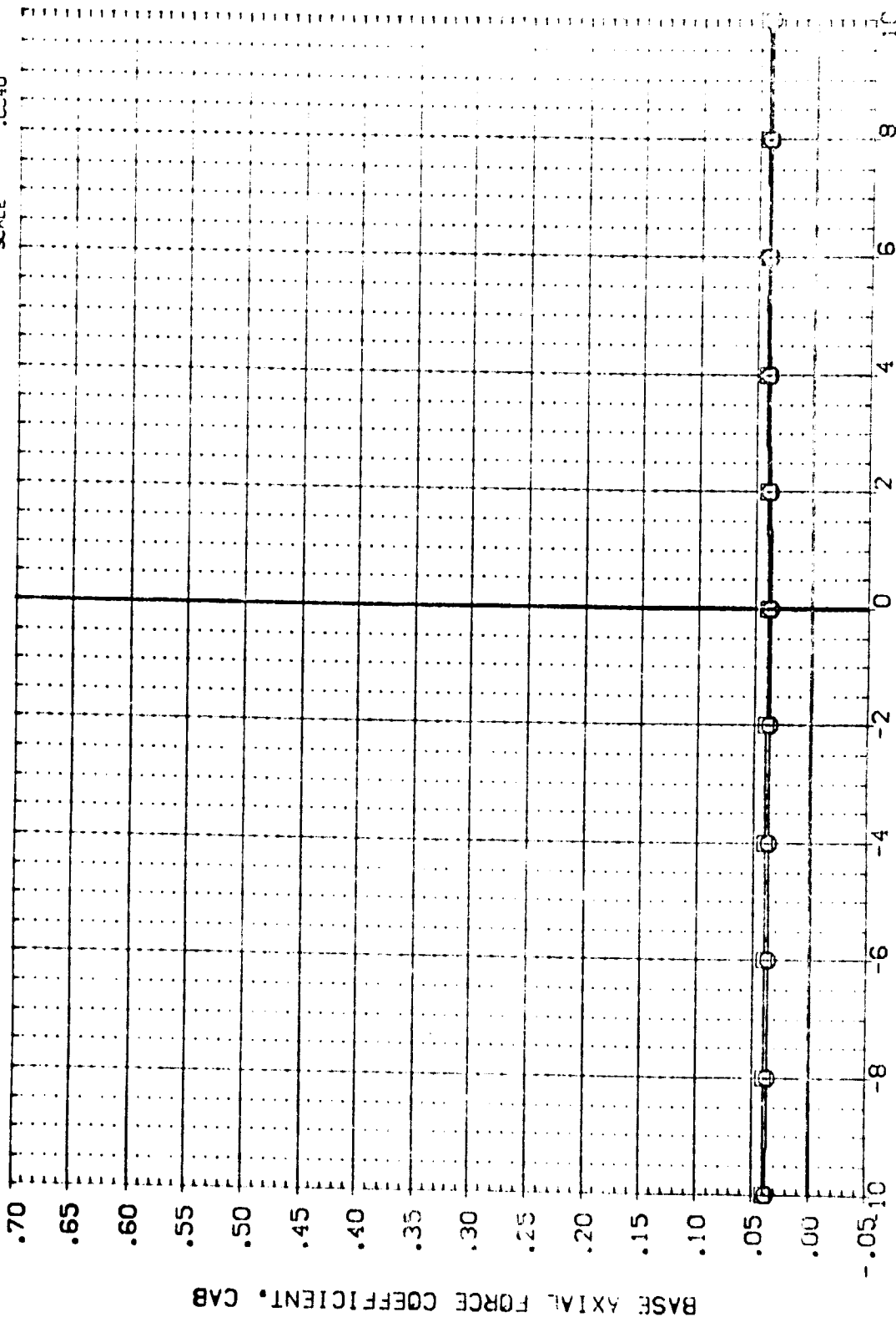
EFFECT ON ORBITER OF GRIT - SPACERS ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83041) ☐ MSFC 570(IA3IF)(03)/(I9)/(S3/2)YIE
 (C83050) ☐ MSFC 570(IA3IF)(03)/(I9)/(S3/2)YIEg

ORBITAL ORBITAL ORBITAL ORBITAL
 .500 .500 .500 .500
 .500 .500 .500 .500

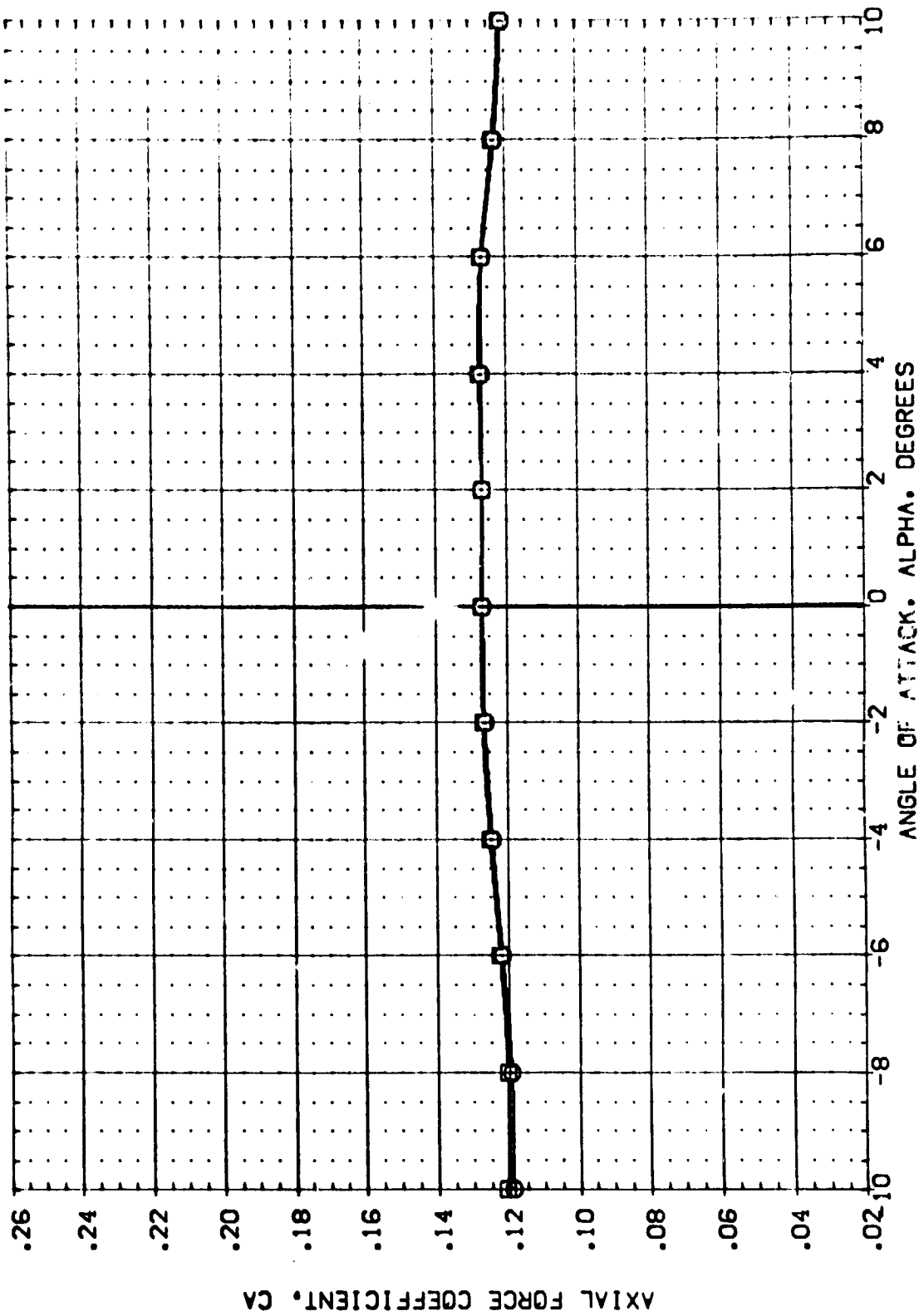
REFERENCE INFORMATION
 SREF 6.1980 SO. N
 LREF 5.3130 N.
 BREF 5.3130 N.
 XMRD 2.5480 N.
 YMRD .0000 N.
 ZMRD .0000 N.
 SCALE .0030



EFFECT ON ORBITER OF GRIT - SPACERS ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(CB3041)	MSFC 570(I31F)(I33)/(I9)/(I3/2)/(I3/2)YIE	.500	9.100	.200	.050	SREF	6.1980
(CB3050)	MSFC 570(I31F)(I33)/(I9)/(I3/2)/(I3/2)YIEg	.500	9.100	.200	.050	LREF	5.3130
						BREF	5.3130
						XMRP	2.5490
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0343



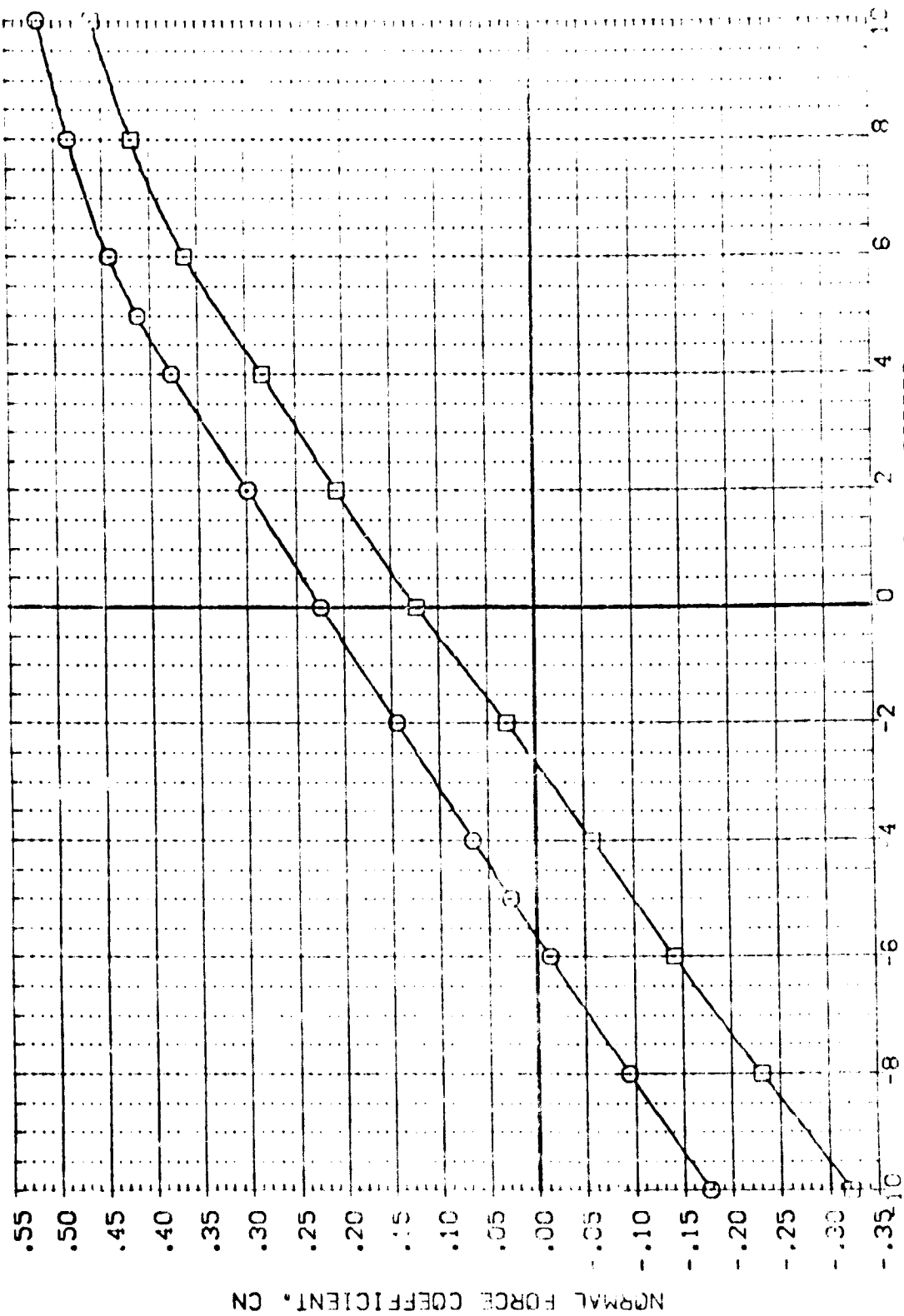
EFFECT ON ORBITER OF GRIT - SPACER ATTACHED TO ET

(C)MACH = 1.25

DATA SET SYMBO: 080021) 080050)
 CONFIGURATION DESCRIPTION
 MFC 570(1A31F)(03)/(19)(U5)/(53/2)/(13/2)
 MFC 570(1A31F)(03)/(19)/(53/2)/(53/2)(1E0)

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .000 .050

REFERENCE INFORMATION:
 SREF 6.1030
 LREF 5.3130
 BREF 5.3130
 XMAP 2.5490
 YMAP .0000
 ZMAP .0000
 SCALE .0040



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

(MACH = 1.25)

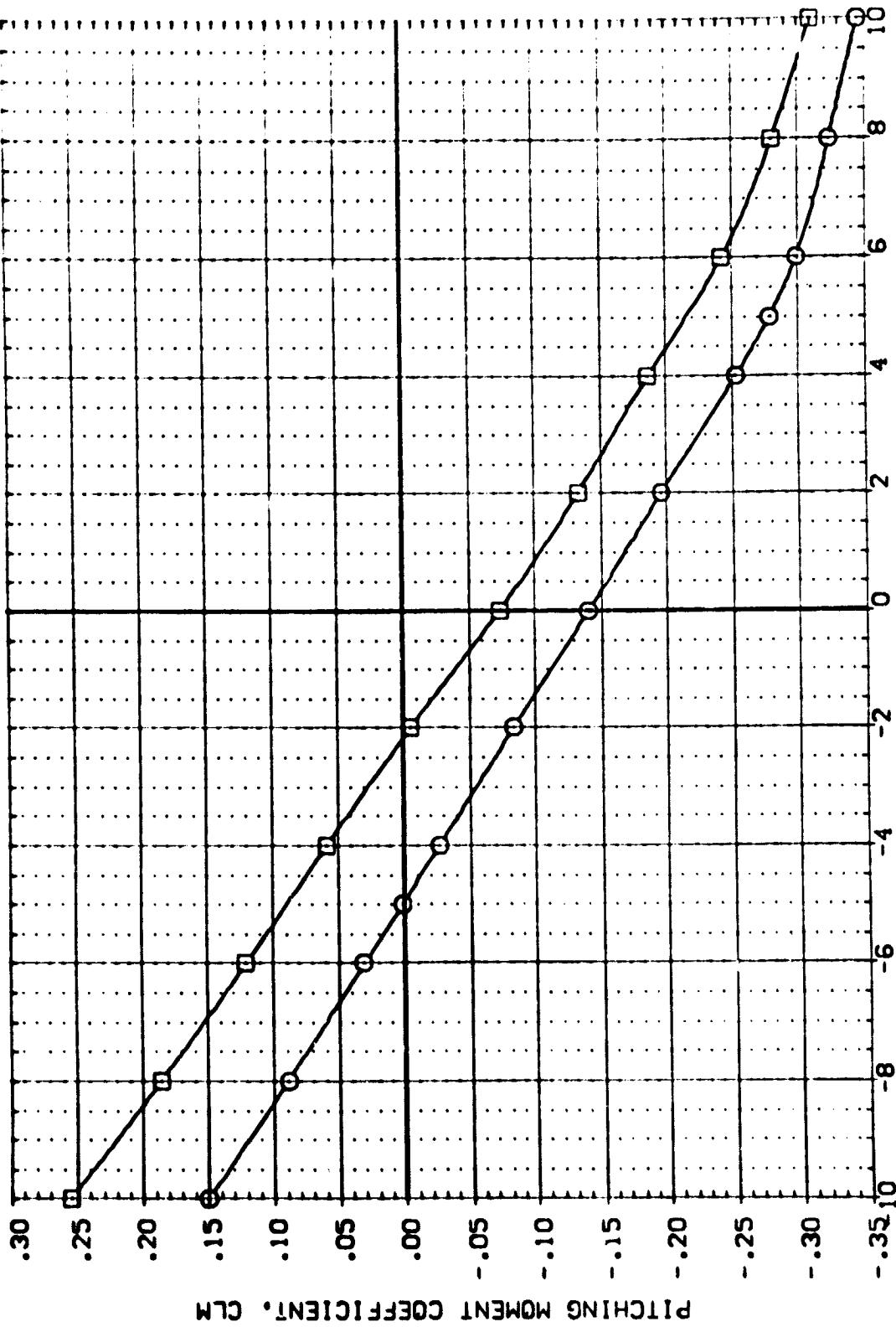
DATA SET SYMBOL: (080021)
 (083050)

CONFIGURATION DESCRIPTION

MSFC 5701(A31F)(03)/(19)(U5)/(03/21)/(03/2)
 MSFC 5701(A31F)(03)/(19)/(03/21)/(03/2)V1EG

ORBITING SPACER SPADIA SPADAP
 .500 .000 .000
 .500 9.100 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 2.3130 IN
 BREF 2.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



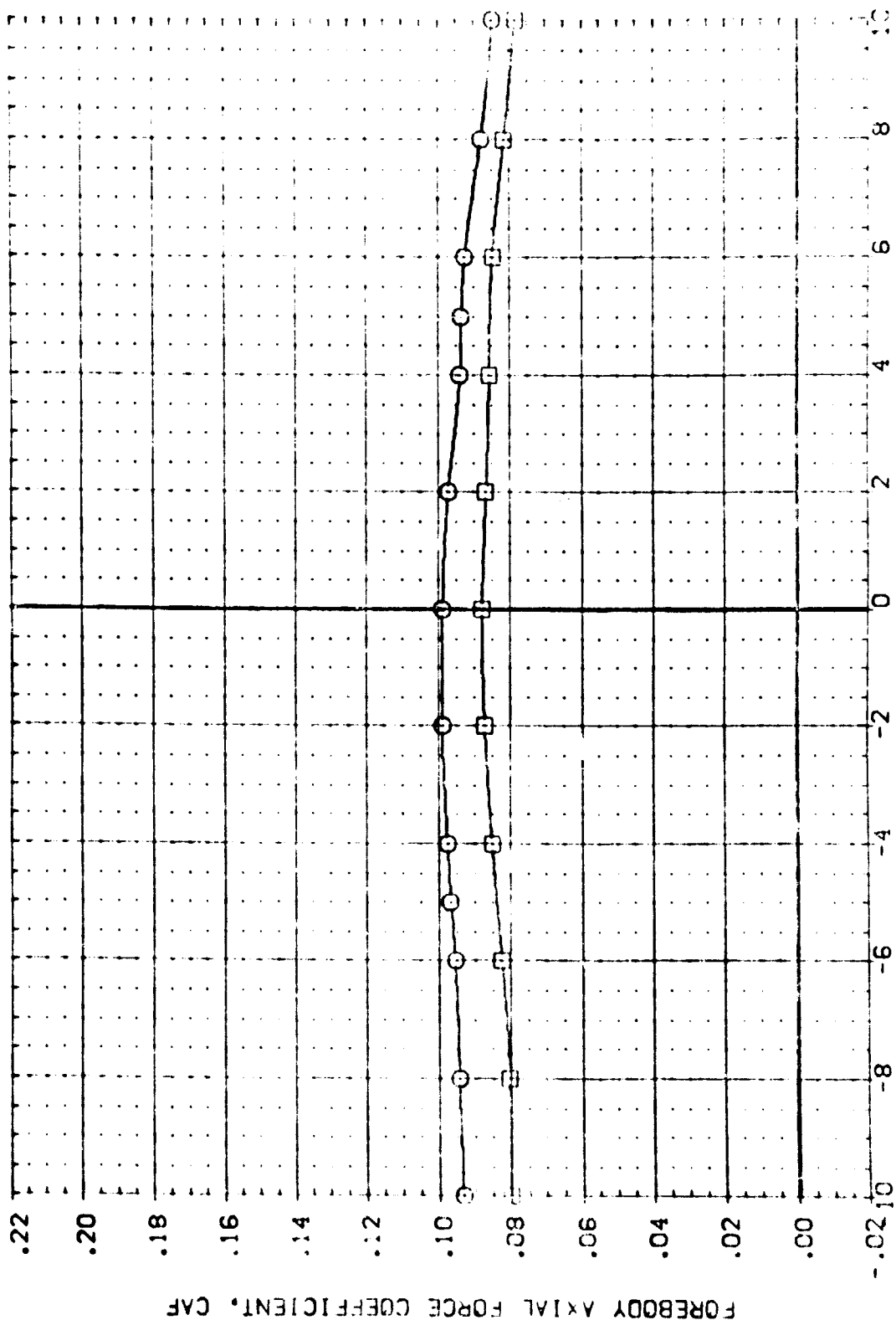
EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (083021) (083050) CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)(U5)/(S3/2)/(S3/2)Y1E8

ORBITING: .500 .500 SPACER: .000 .000 .000 .000 .000 .000 SPADIA: .000 .000 .000 .000 .000 .000 SPAGAP: .000 .000 .000 .000 .000 .000

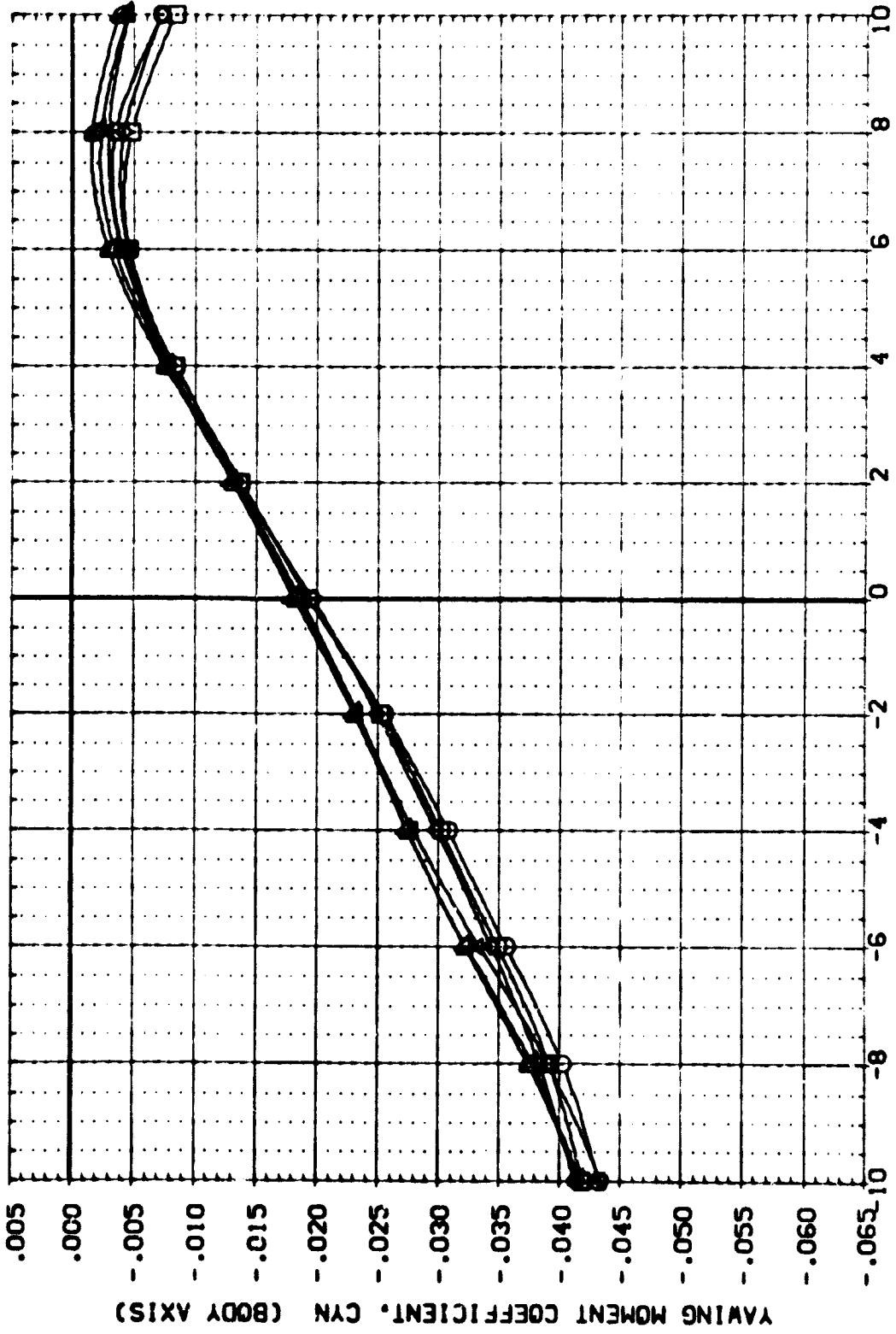
REFERENCE INFORMATION: SREF: 6.1980 SC: 1N LREF: 5.3130 BREF: 5.3130 XPRP: 2.5480 YPRP: .0000 ZPRP: .0000 SCALE: .0010



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO ET

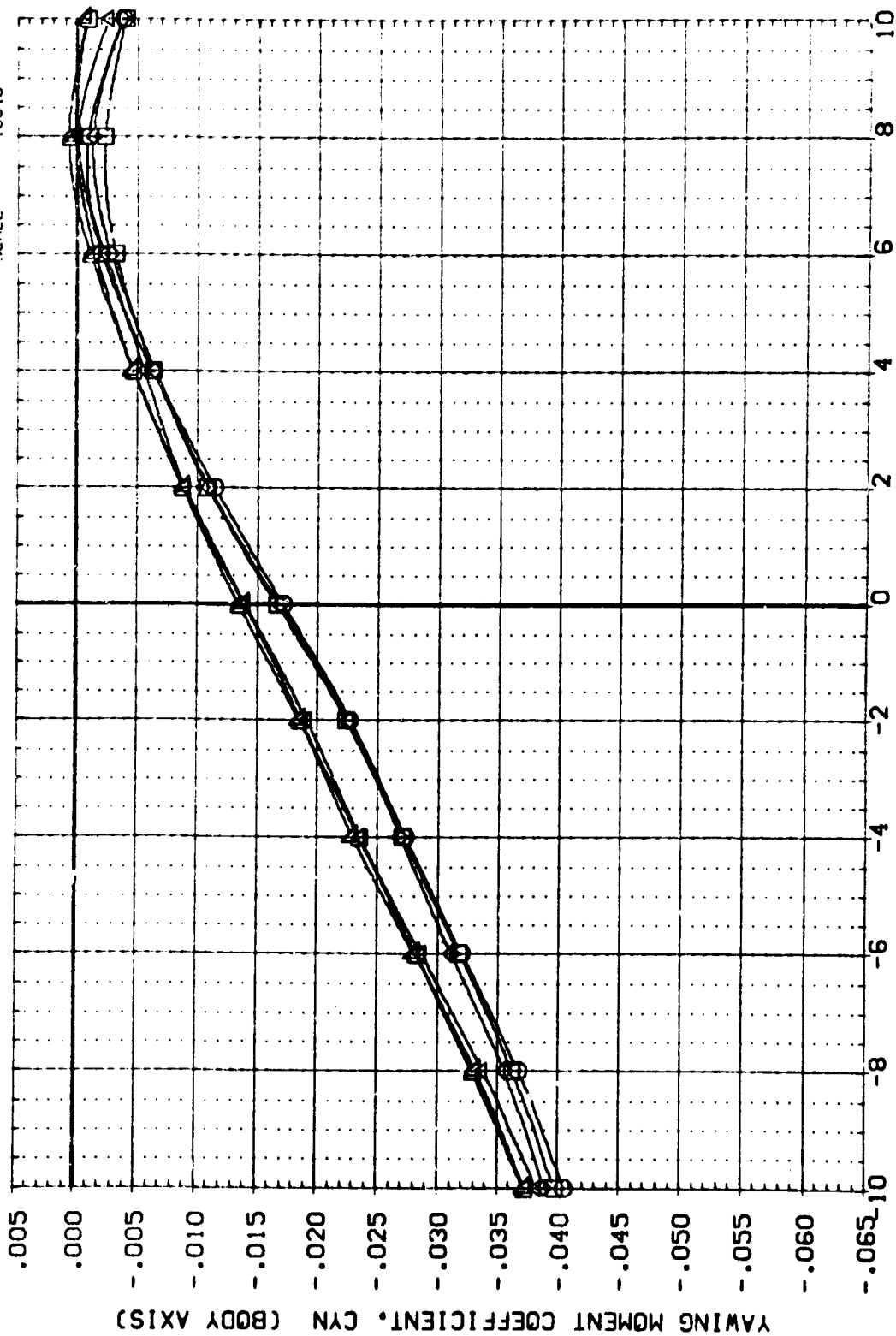
CA/MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITING	DELTA Z	REFERENCE INFORMATION	
(A83508)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	- .500	.140	SREF	.9720 IN
(A83509)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	- .500	.140	LREF	5.3130 IN
(A83510)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	1.500	.140	BREF	5.3130 IN
(A83511)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	- .500	.260	XMRP	2.5450 IN
(A83512)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	- .500	.260	YMRP	.0000 IN
(A83513)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	5.000	1.500	.260	ZMRP	.0000 IN
					SCALE	.0040



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (O3)/(T9)/(S3/2)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(A83508)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.140	SREF .9720 SQ. IN
(A83509)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	.500	.140	LREF 5.3130 IN.
(A83510)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.140	BREF 5.3130 IN.
(A83511)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	-.500	.280	XMRP 2.5490 IN.
(A83512)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	.500	.280	YMRP .0000 IN.
(A83513)	MSFC 570(IA31F)(S3/2)/(03)/(T9)/(S3/2)	5.000	1.500	.280	ZMRP .0000 IN.
					SCALE .0010



STABILITY CHARACTERISTICS - LEFT SRB (S3/2) IN PRESENCE OF (03)/(T9)/(S3/2)

(F)MACH = 3.48

DATA SET SYMBOL: (DB3021) (CB3056)

CONFIGURATION DESCRIPTION:
 MSFC 570(IA3I)(03)/(T9)(U5)/(S3/2)/(S3/2)Y2E
 MSFC 570(IA3I)(03)/(T9)(U5)/(S3/2)/(S3/2)Y2E

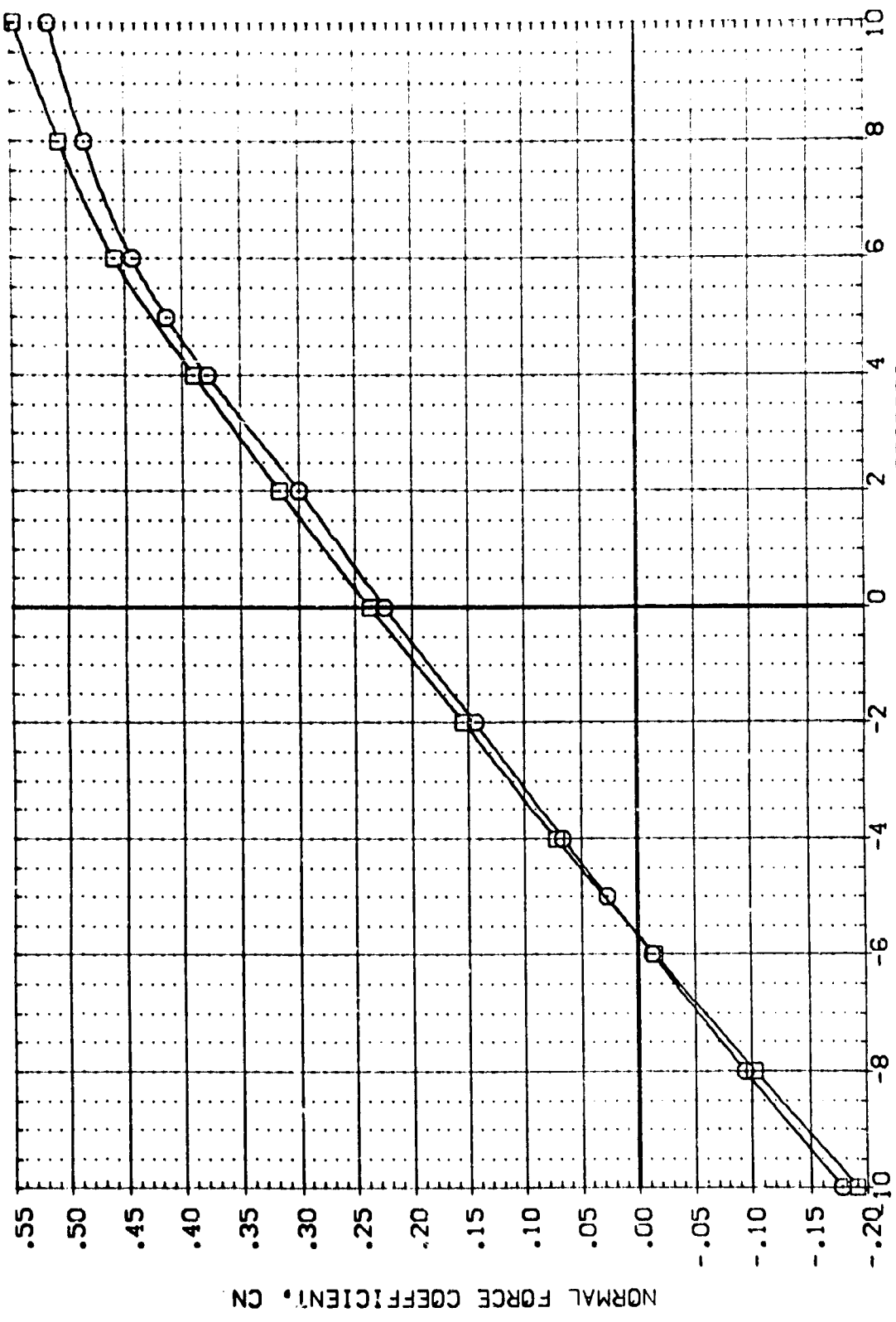
ORBITING: .500 .500

SPACER: .000 9.000

SPADIA: .000 .200


SPAGAP: .000 .050

REFERENCE INFORMATION:
 SREF: 6.1850
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



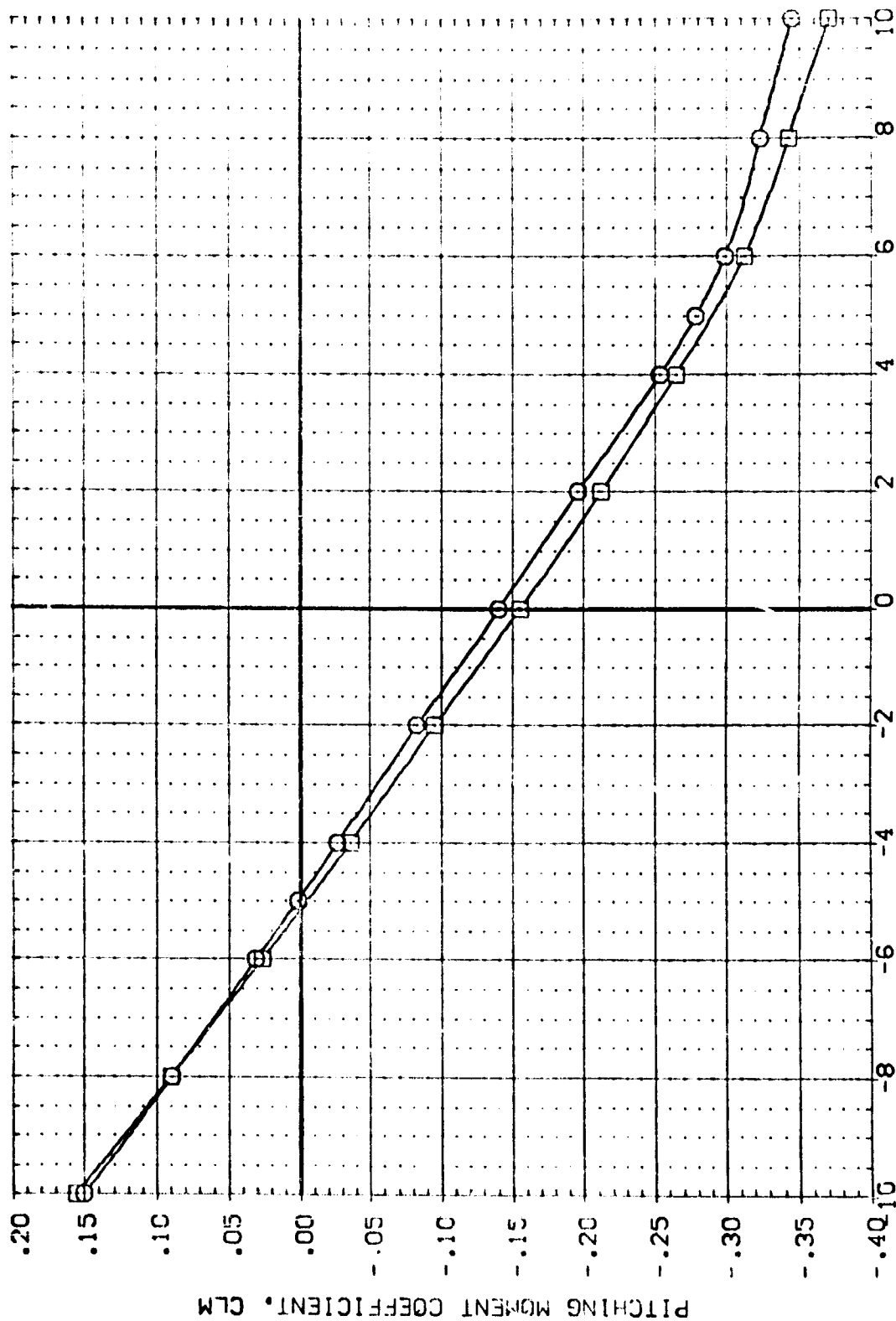
EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (082021) (083056)  CONFIGURATION DESCRIPTION: MSFC 570((1A31F)(03)/(19)(US)/(S3/2)/(S3/2))YZE MSFC 570((1A31F)(03)/(19)(US)/(S3/2)/(S3/2))YZE

ORBITING: .500 .500 SPACER: .000 .000 SPAGAP: .000 .000

REFERENCE INFORMATION: GREF: 5.193C LREF: 5.313C BREF: 5.313C XMRP: 2.545C YMRP: .000 ZMRP: .000 SCALE: .0010



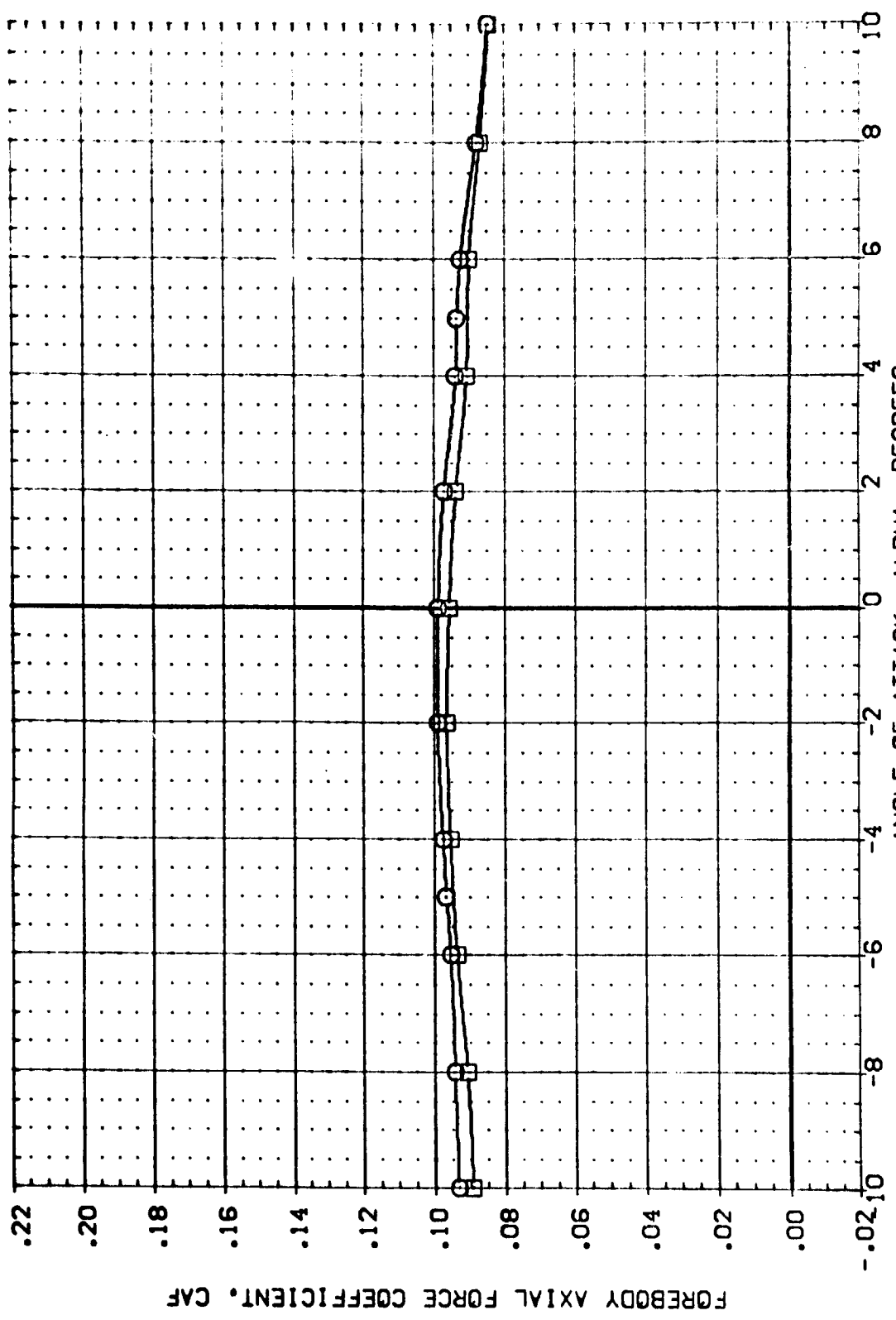
EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO ET

(M)MACH = 1.25

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DATA SET SYMBOL: (D80021) (D80056)
CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(03)/(I9)(U)/(S3/2) MSFC 570(IA3IF)(03)/(I9)(U)/(S3/2)Y2E
ORBITAL: ORBINC .500 .500
SPACER: SPACER .000 9.000
SPADIA: SPADIA .000 .200
SPAGAP: SPAGAP .000 .050
REFERENCE INFORMATION: SREF 6.1980 SQ. IN. LREF 5.3130 IN. BREF 5.3130 IN. XMRP 2.5190 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE .0040



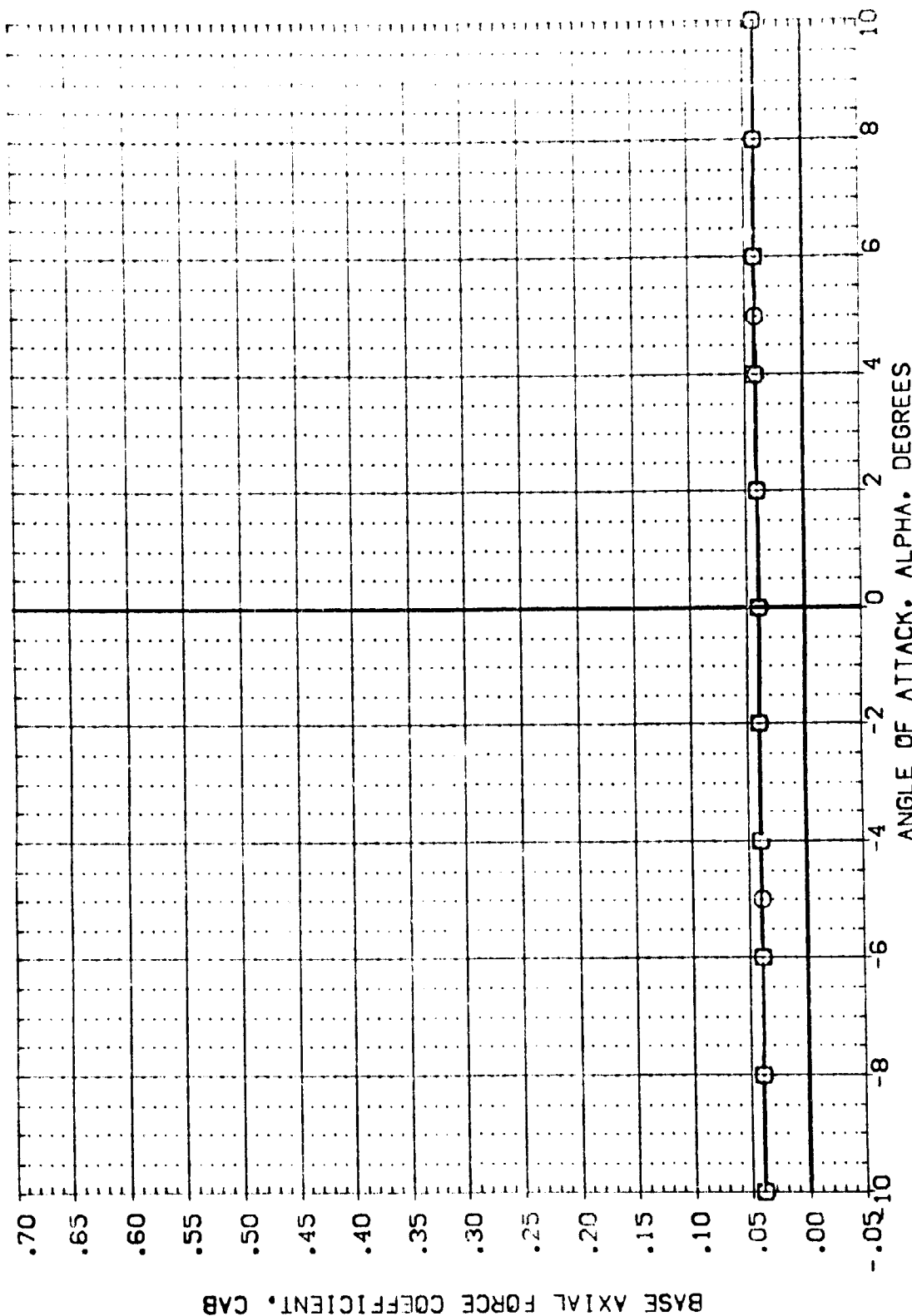
EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(080721)	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
(080356)	MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)YE

ORBITING	SPACER	SPACIA	SPAGAP
.500	.000	.000	.000
.500	9.000	.200	.050

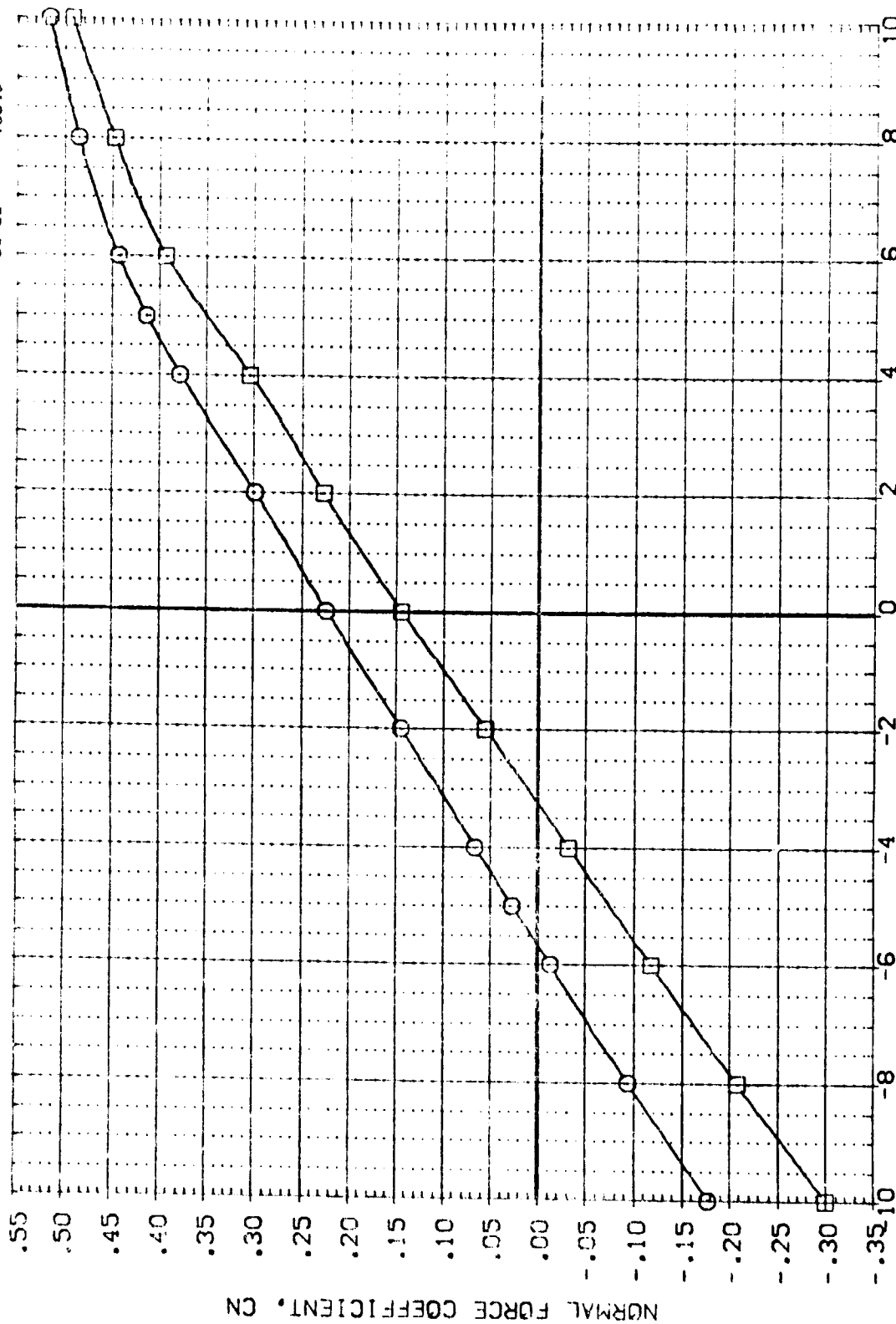
SREF	6.1980	SG.
LREF	5.2130	N.
BREF	5.2130	N.
XREF	5.2450	N.
YREF	.0000	N.
ZREF	.0000	N.
SCALE	.0070	N.



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083021) MSFC 570(1A31F)(03)/(19)(U5)/(S3/2)/(S3/2)
 (083051) MSFC 570(1A31F)(03)/(19)/(S3/2)/(S3/2)3E

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000 .000
 .500 .100 .200 .000

REFERENCE INFORMATION
 SREF 8.1980 S3 IN
 LREF 5.2130
 BREF 5.2130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0010



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

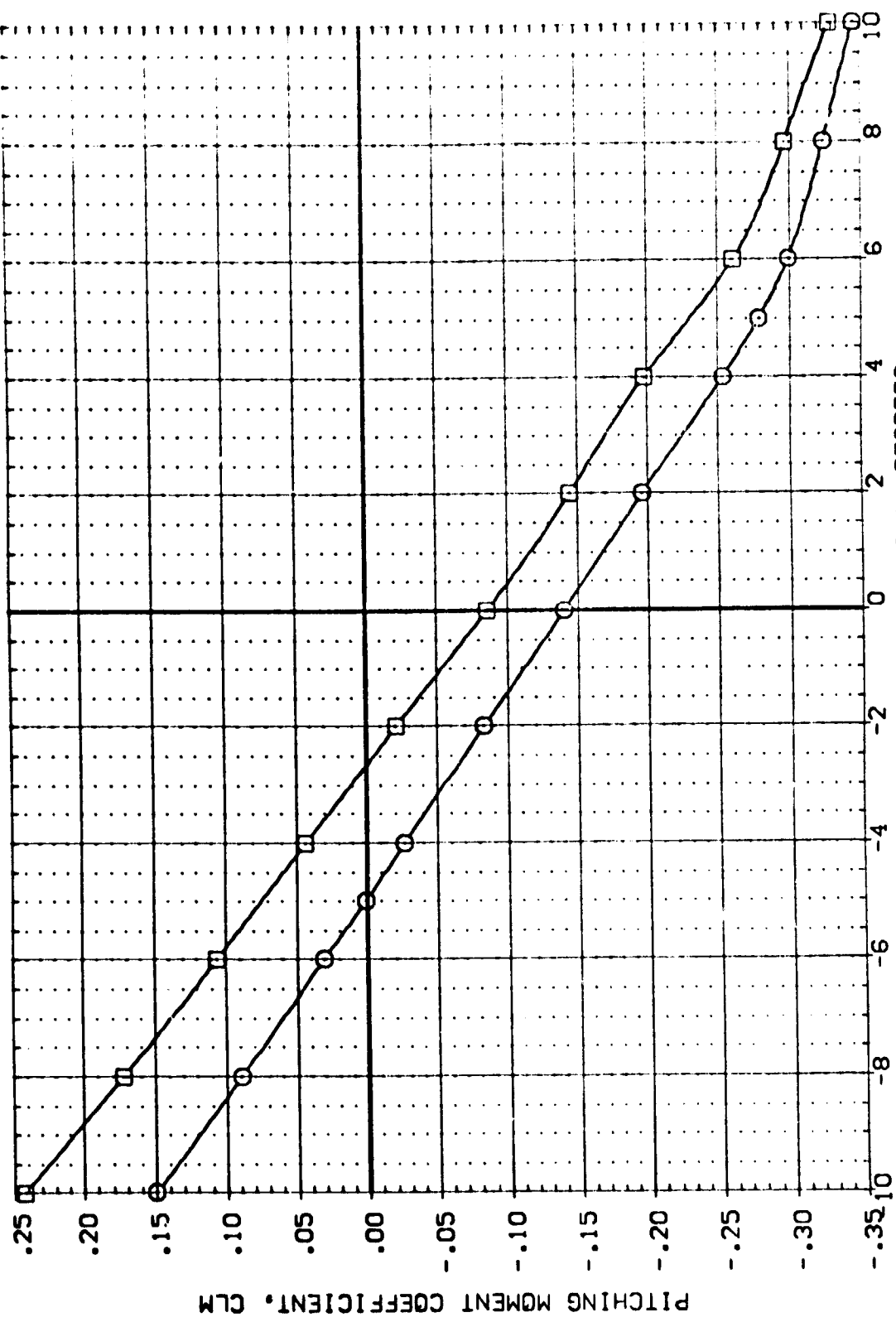
(A)MACH = 1.25

DATA SET SYMBOL: MSFC 5701(A31F)(03)/(19)(U5)/(S3/2)/(S3/2)YAE
 (080021)
 (080051)

CONFIGURATION DESCRIPTION

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .100 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010



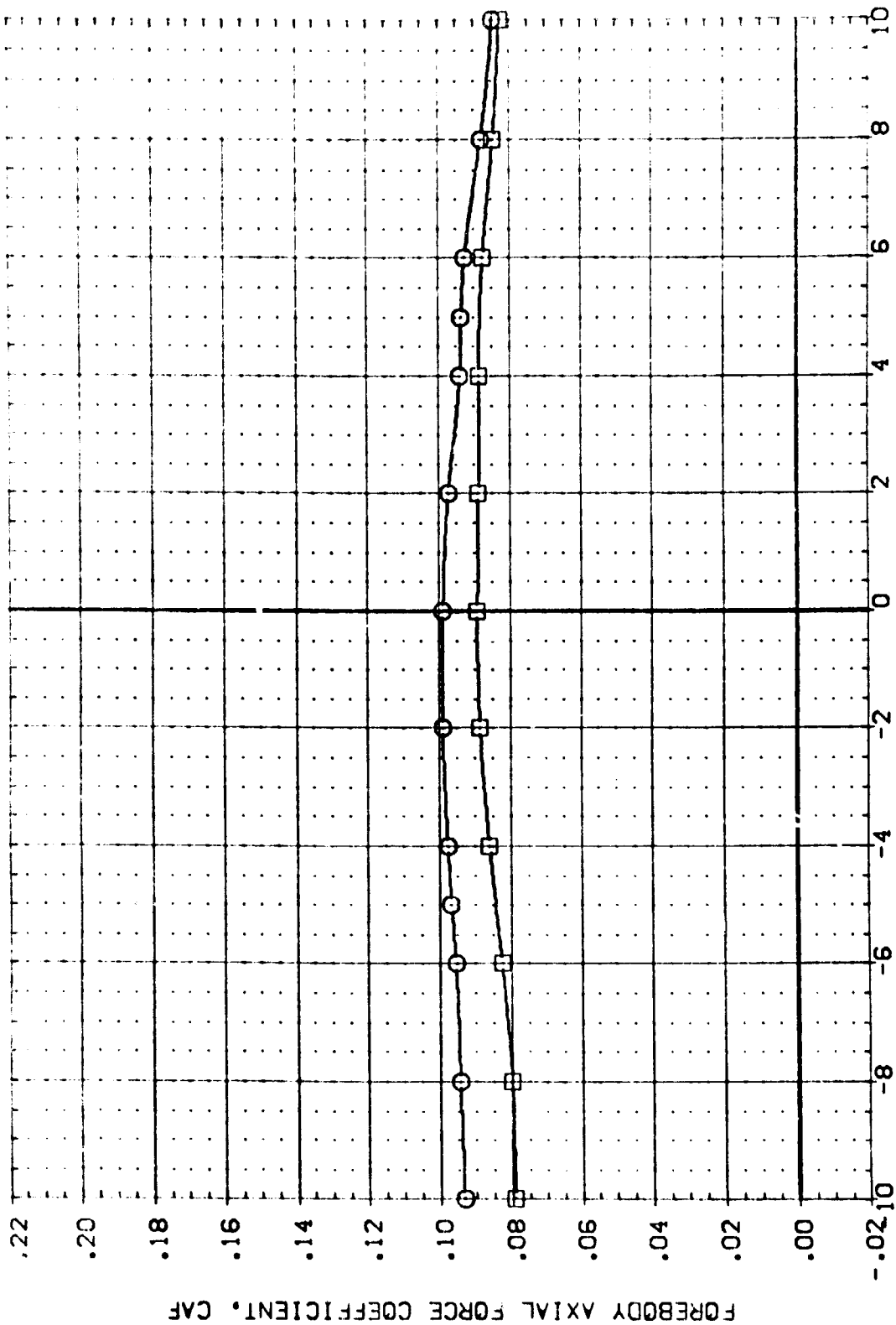
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (063021) ☐ MS-C 570 (A31F) (03) / (19) / (53/2) / (53/2)
 (083051) ☐ MS-C 570 (A31F) (03) / (19) / (53/2) / (53/2) YAE

USBJNC SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .000 .000

REFERENCE INFORMATION
 SPREF 5.11580
 LPREF 5.11580
 BPREF 5.11580
 XREF 5.11580
 YREF 5.11580
 ZREF 5.11580
 SCALE 1.0



ANGLE OF ATTACK, ALPHA, DEGREES

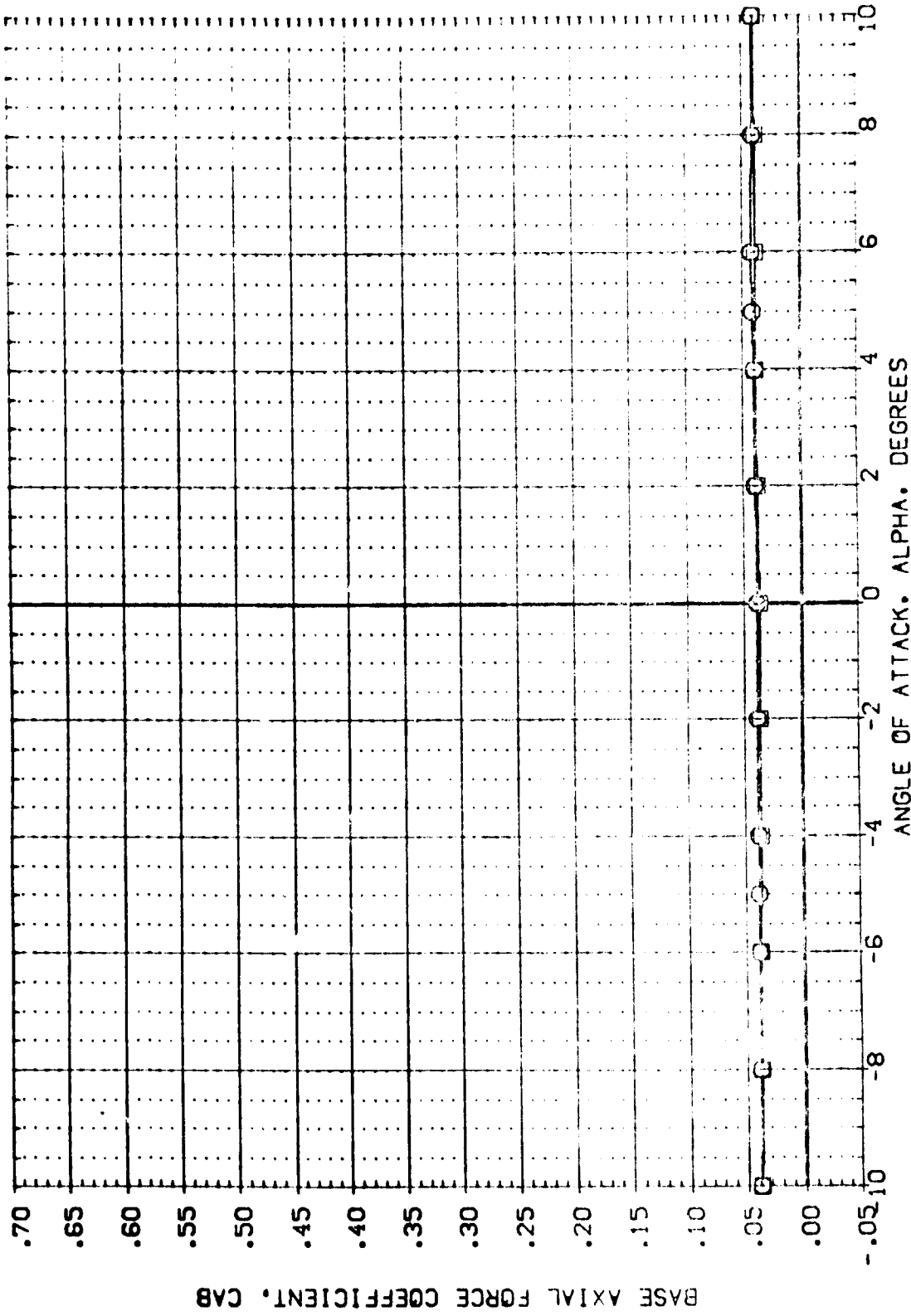
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 {030021} MSFC 570(1A31F)(03)/(T9)/(U5)/(S3/2)/(S3/2)
 {030051} MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)E

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .100 .050

REFERENCE INFORMATION
 SREF 6.1980 S2: IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0040



EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO E1

(A)MACH = 1.25

DATA SET SYMBOL: ☐ MSFC 5701(A31F)(03)/(179)(U3)/(S3/2)/(S3/2)
☐ MSFC 5701(A31F)(03)/(179)/(S3/2)/(S3/2)YAE

CONFIGURATION DESCRIPTION

ORBITING

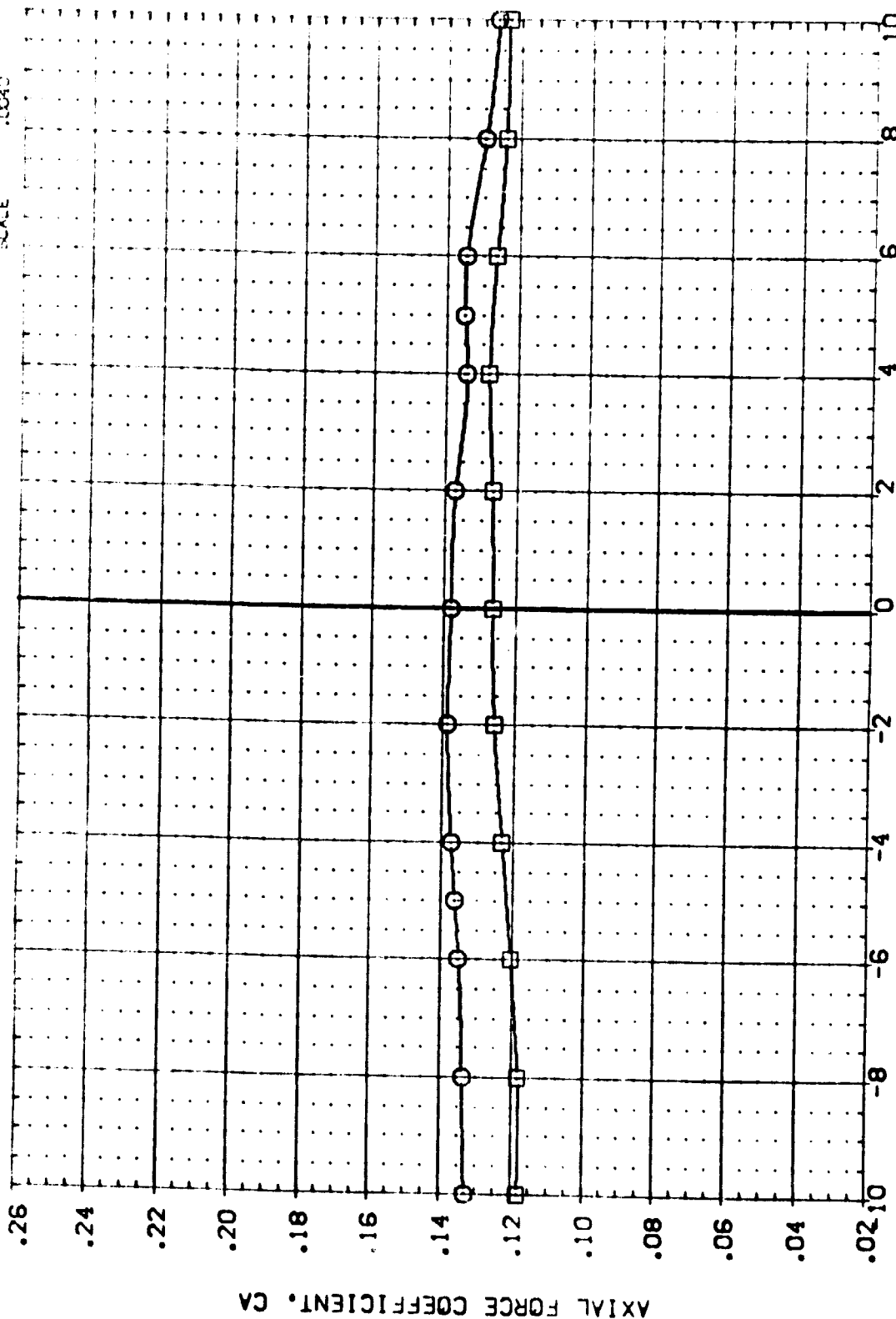
SPACER

SPADIA

SPAGAP

REFERENCE INFORMATION

SREF 6.1980
 LREF 5.3120
 UREF 5.3120
 VREF 2.0480
 WREF 1.0000
 ZREF 1.0000
 SCALE 1.0000



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (D00002) (D00052)

CONFIGURATION DESCRIPTION:
 HSC 570(1A31F)(03)/(19)/(53/2)/(53/2)
 HSC 570(1A31F)(03)/(19)/(53/2)/(53/2)

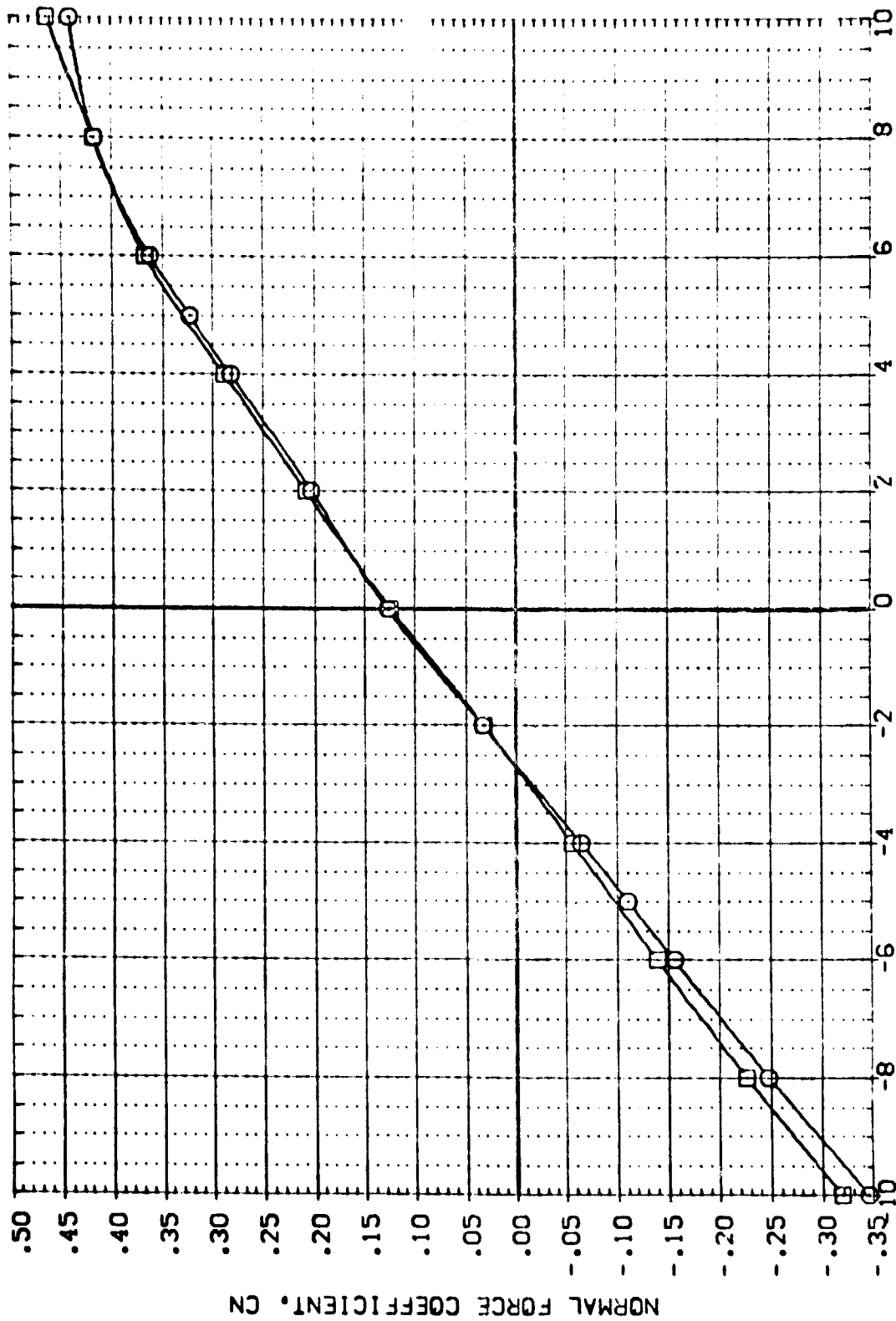
ORBITING: .500 .500

SPACER: .000 .000 21.220

SPADIA: .000 .050

SPAGAP: .000 .050

REFERENCE INFORMATION:
 SREF: 6.1980
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO 03

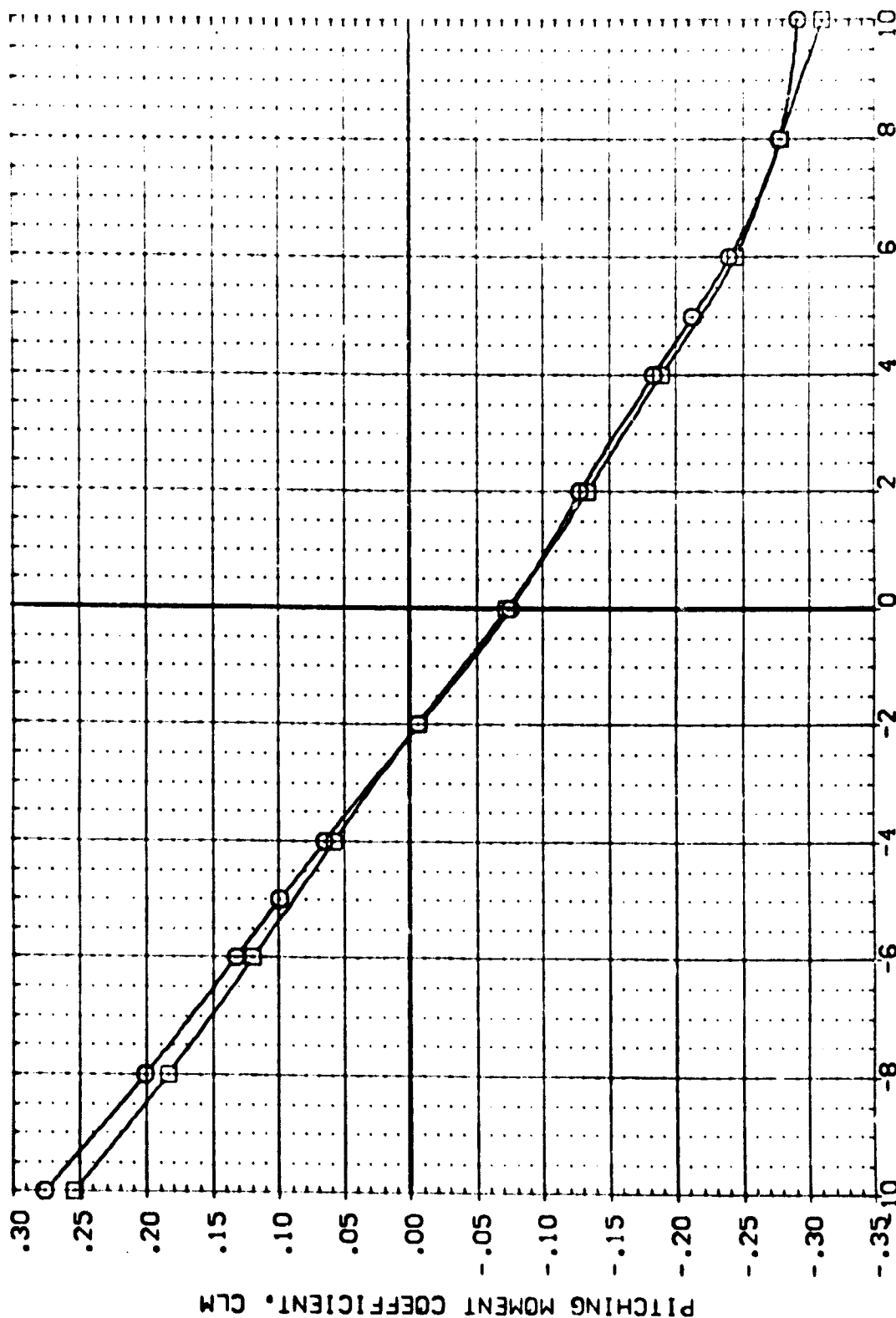
(A)MACH = 1.25

DATA SET SYMBOL: (000002) ☐ MSFC 570(1A31F)(03)/(15)/(S3/2)/(S3/2)
 (000052) ☐ MSFC 570(1A31F)(03)/(15)/(S3/2)/(S3/2)Y10

CONFIGURATION DESCRIPTION

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.220 .050

REFERENCE INFORMATION
 SREF 6.1500 SC 1.0
 LREF 5.3130
 BREF 5.3130
 XPROP 2.5450
 YPROP .0000
 ZPROP .0000
 SCALE .0010



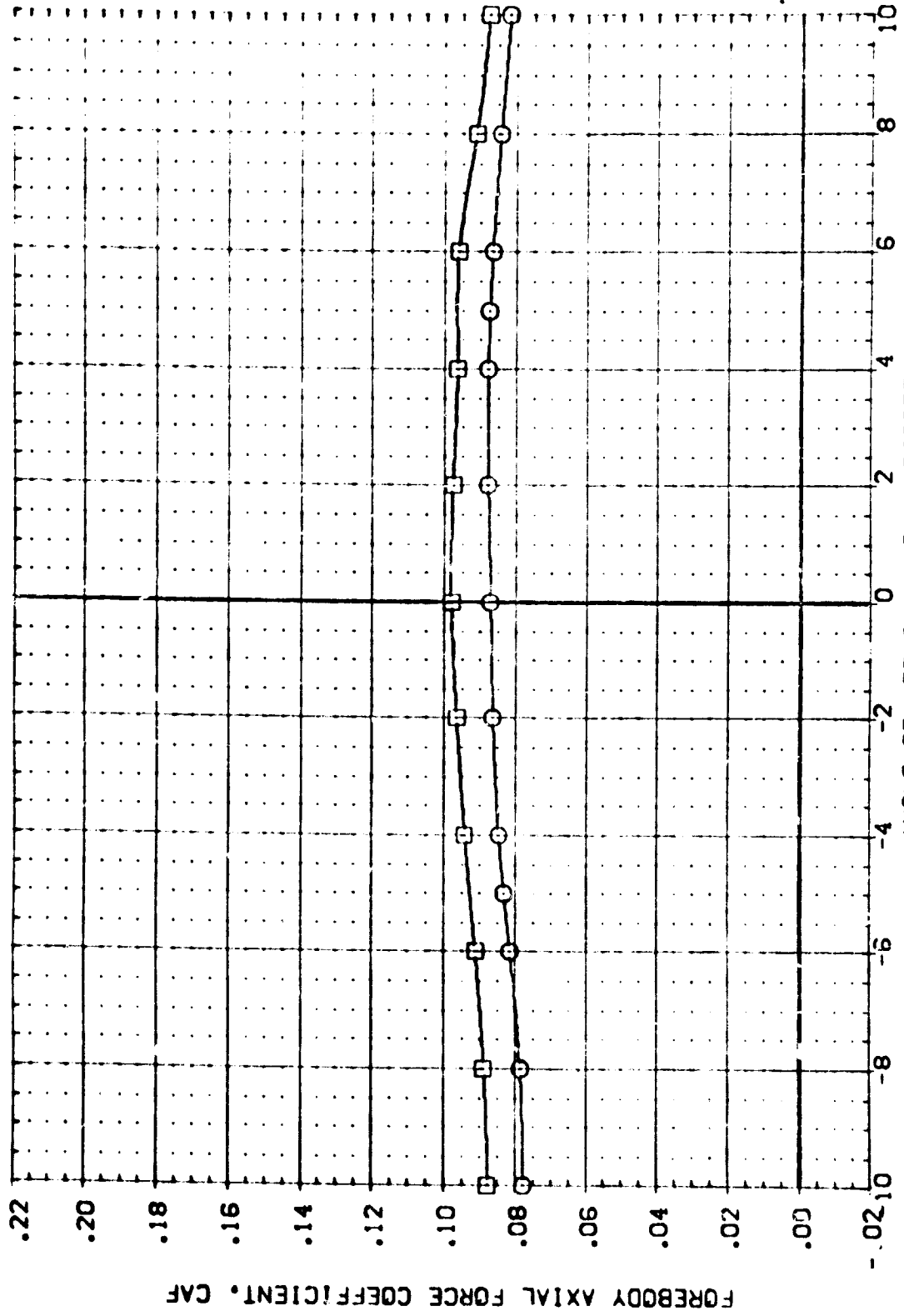
EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO 03

(A)MACH = 1.25

DATA SET SYMBOL: ORBITER CONFIGURATION DESCRIPTION
 (000002) MSFC 570((1A3)F)(03)/((191)/((S3/2)/((S3/2)/Y10
 (000002) MSFC 570((1A3)F)(03)/((191)/((S3/2)/((S3/2)/Y10

ORBITER SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.220 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XREF 2.5450
 YREF .0000
 ZREF .0000
 SCALE .0040

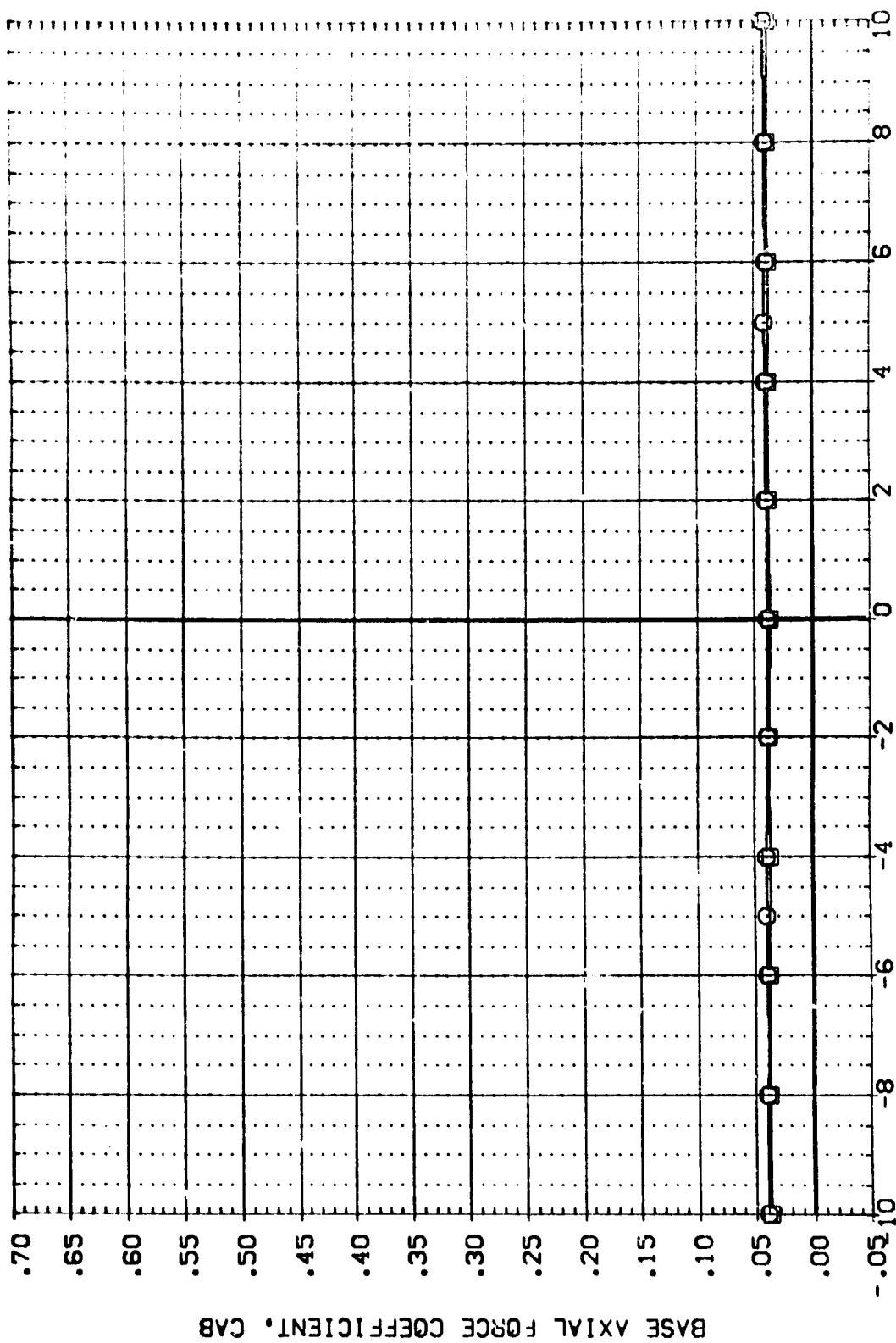


EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO 03

(A) MACH = 1.25



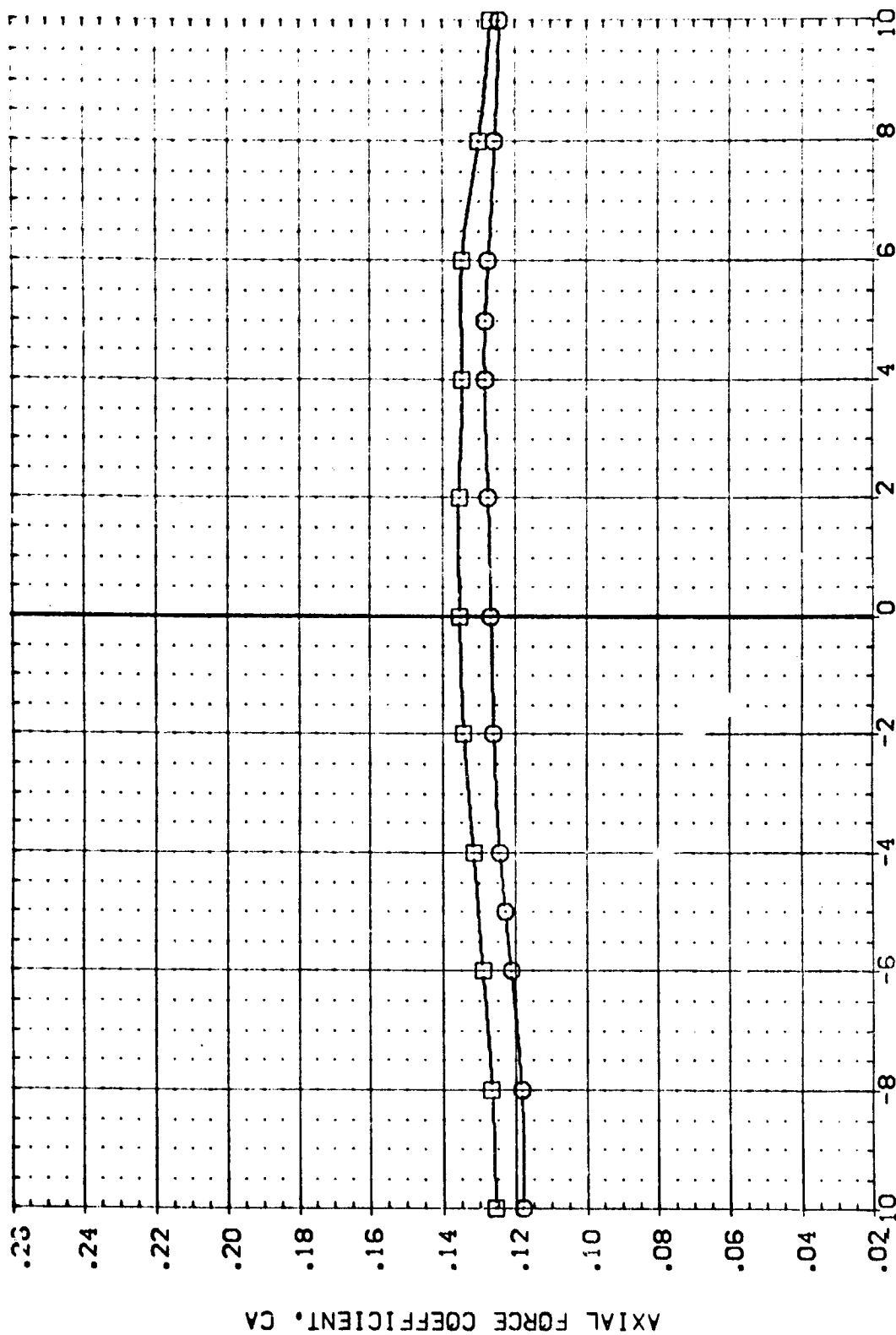
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(D83002)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	.500	.000	.000	.000	SREF 6.1980 SQ. IN
(C83052)	MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)	.500	21.220	.200	.050	LREF 5.3130 IN.
						BREF 5.3130 IN.
						XMRP 2.5490 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0010



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO 03

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(080002)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))Y10	.500	.020	.000	.000	SREF 6.1980
(080052)	MSFC 570((A31F)(03)/(19)/(S3/2)/(S3/2))Y10	.500	21.220	.200	.050	LREF 5.3130
						BREF 5.3130
						XMRP 2.5490
						YMRP .0000
						ZMRP .0000
						SCALE .0010



EFFECT ON ORBITER OF SPACERS - ATTACHED FORE AND AFT TO 03

(A)MACH = 1.25

DATA SET SYMBOL: {083002}
 {083053}

CONFIGURATION DESCRIPTION

MSFC 570(I31F)(03)/(I3)/(S3/2)/(S3/2)Y20
 MSFC 570(I31F)(03)/(I3)/(S3/2)/(S3/2)Y20

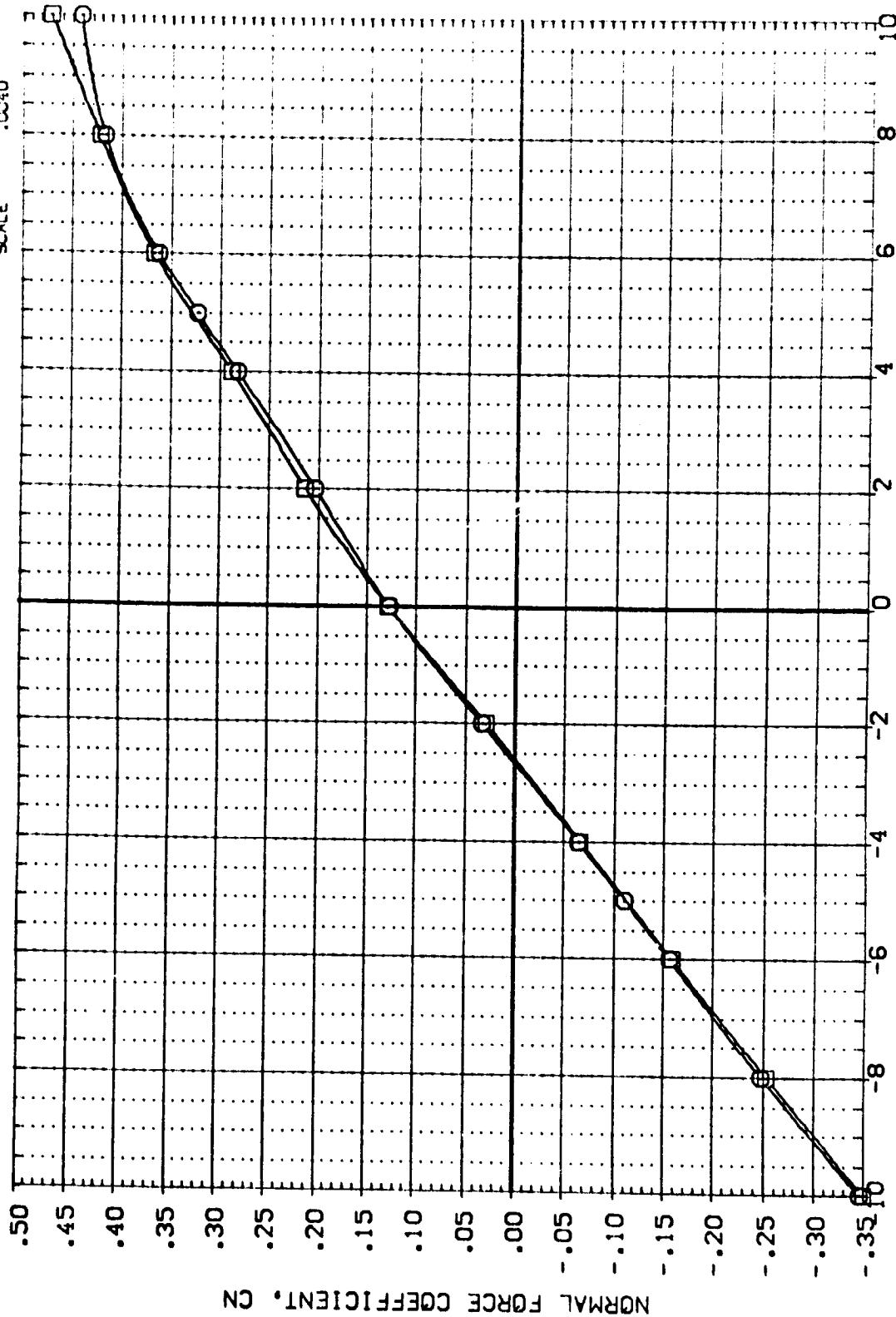
ORBITING
 .500
 .500

SPACER
 .000
 21.000

SPADIA
 .000
 .200

SPAGAP
 .000
 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0010



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO 03

CA/MACH = 1.25

DATA SET SYMBOL: (083002) (083053)

CONFIGURATION DESCRIPTION:
 MSFC 570((1A31F)(03)/(19)/(S3/2)/(S3/2)
 MSFC 570((1A31F)(03)/(19)/(S3/2)/(S3/2)20

ORBITING: .500 .500

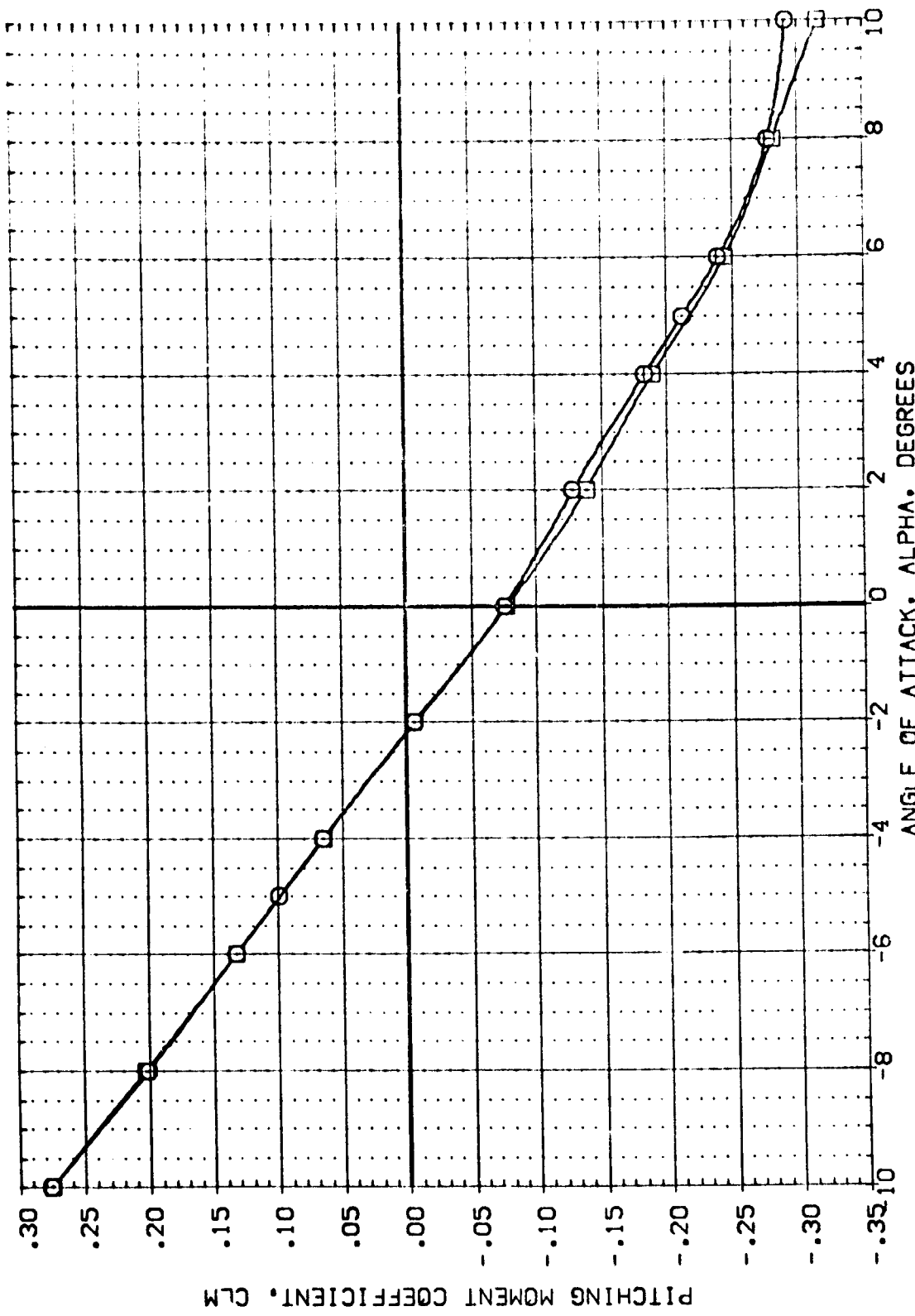
SPACER: .000 21.000

SPADIA: .000 .200

SPAGAP: .000 .050

REFERENCE INFORMATION:
 SREF 6.1990
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0040

SO: IN
 77777777



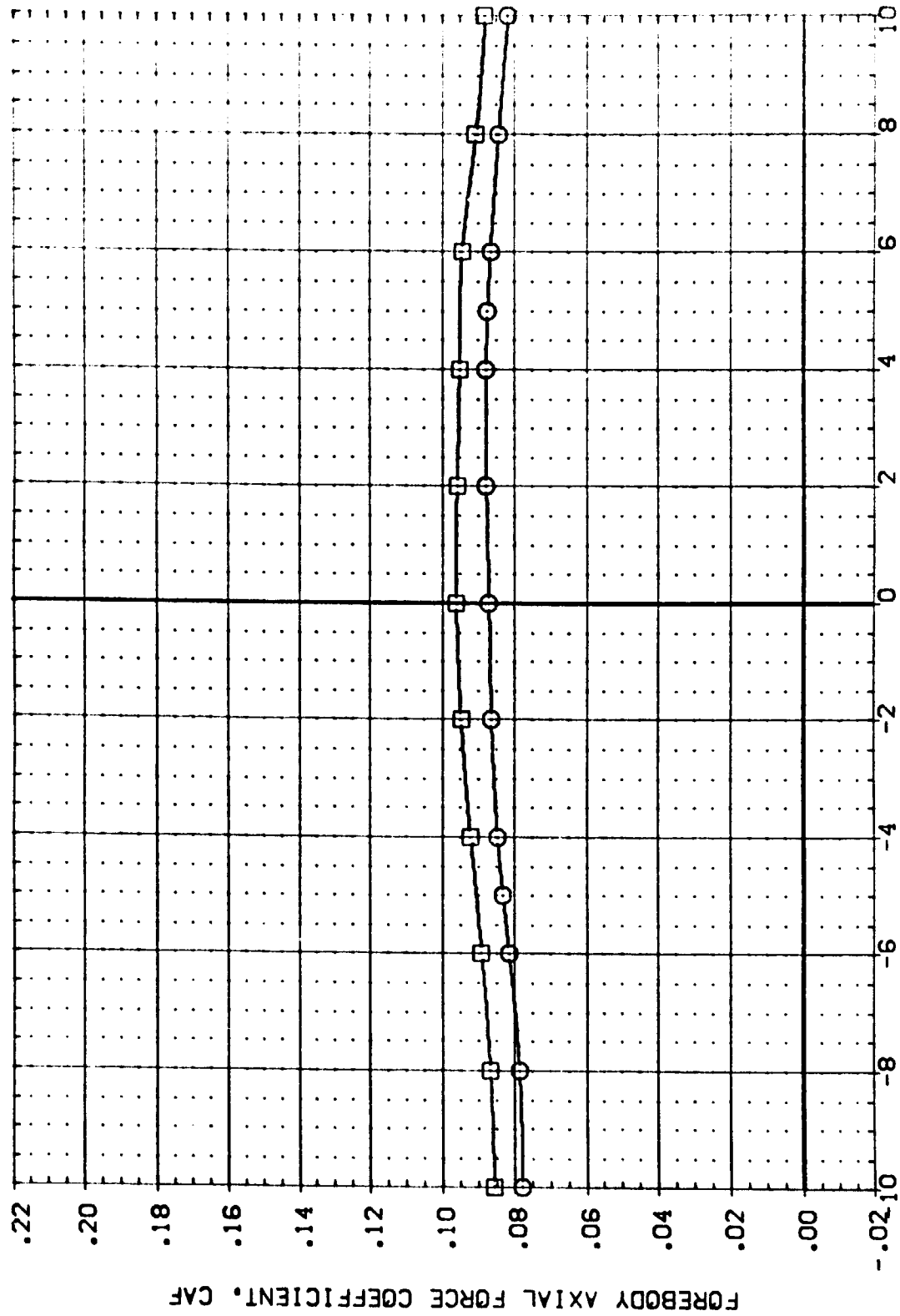
EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083002) □ MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)Y20
 (083053) □ MSFC 570(IA3IF)(03)/(I9)/(S3/2)/(S3/2)Y20

ORBIT INC SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.000 .050

REFERENCE INFORMATION
 SREF 6.1950 SC
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO 03
 ANGLE OF ATTACK, ALPHA, DEGREES

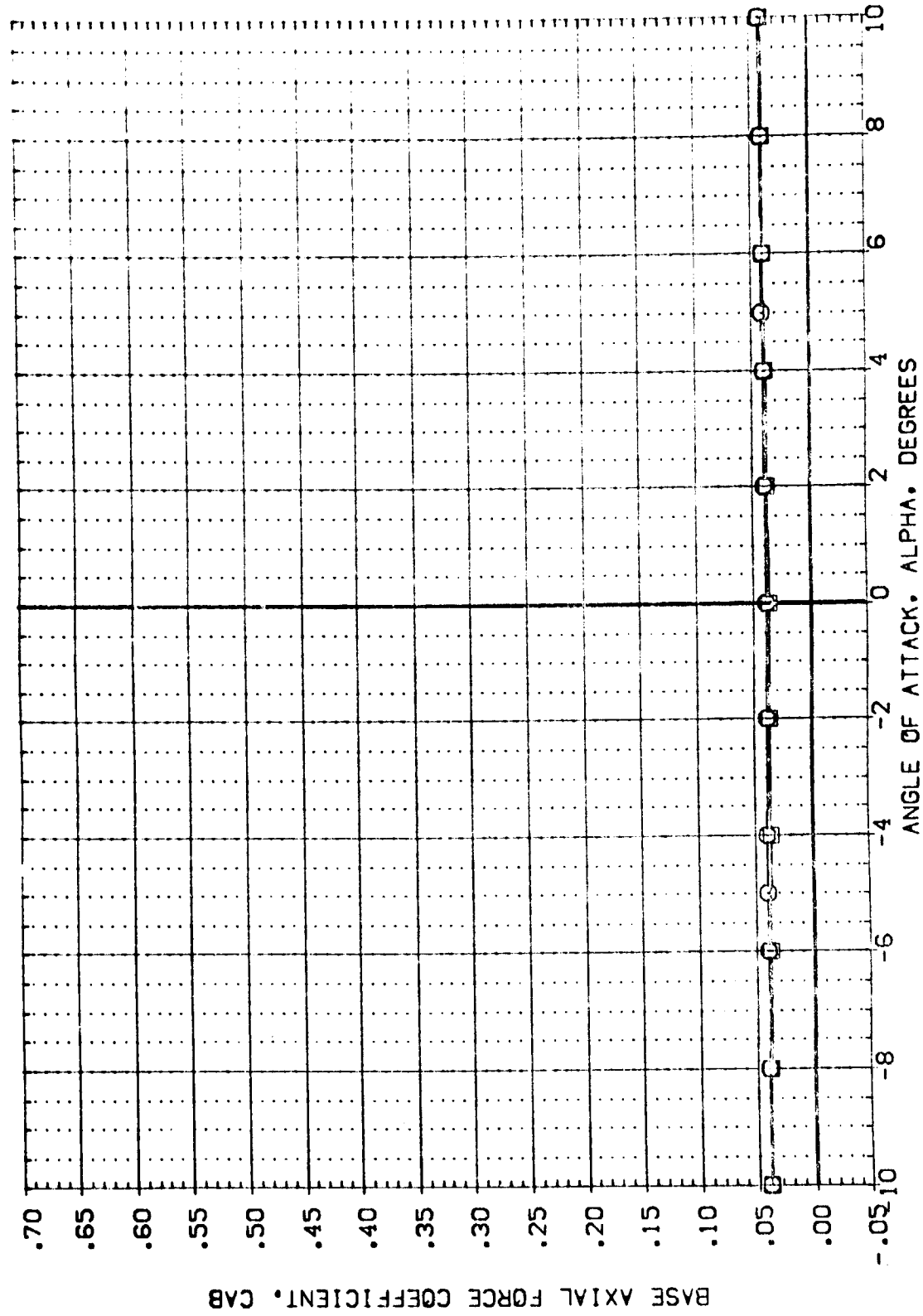
(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION
(D80002)	M5FC 570(IA31F)(03/1'9)/(S3/2)/(S3/2)	
(C80653)	M5FC 570(IA31F)(03/1'9)/(S3/2)/(S3/2)Y20	

[illegible]

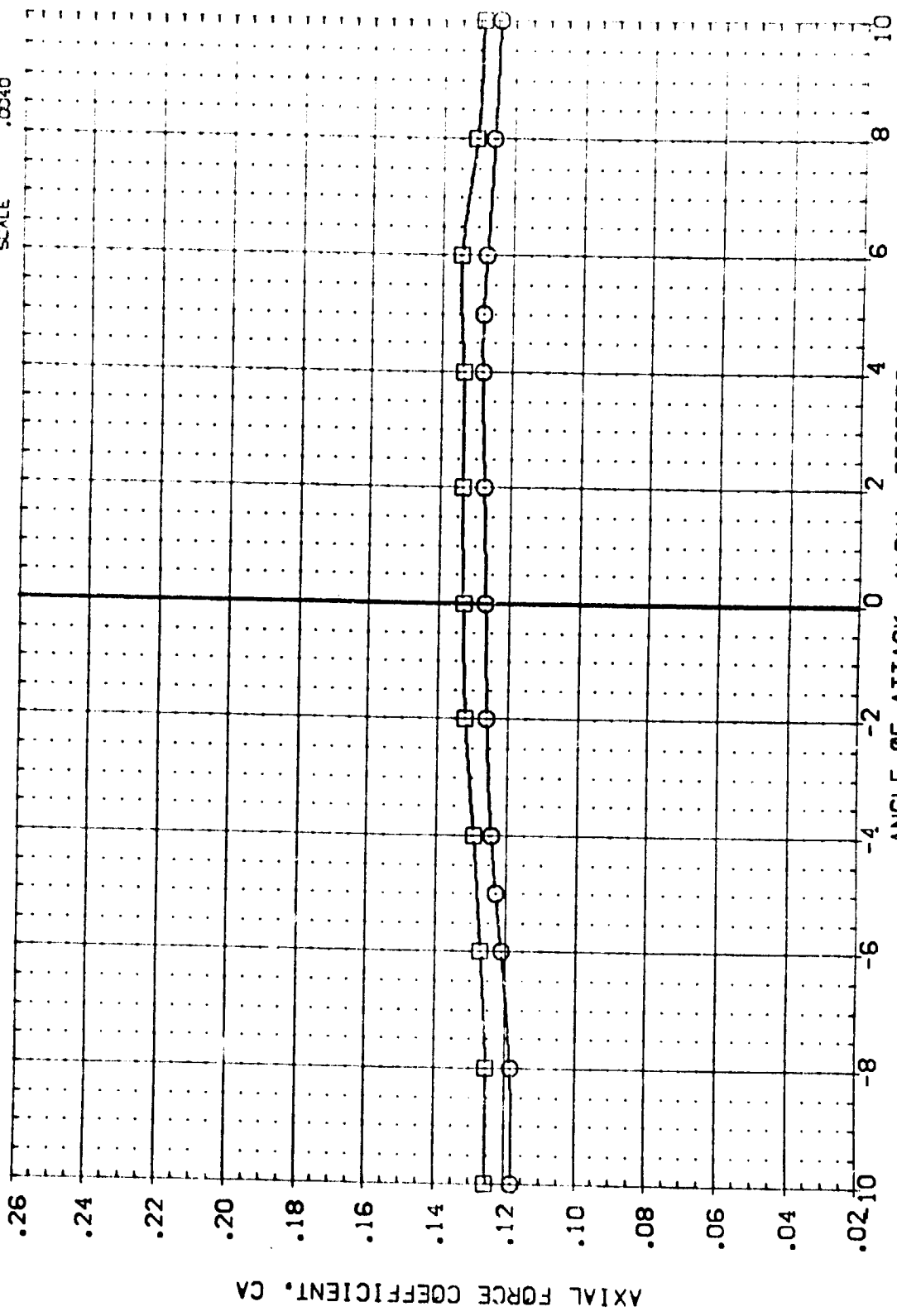
ORBITAL	SPACER	SPADIA	SPAGAP
.500	.000	.000	.000
.500	21.000	.200	.050

REFERENCE INFORMATION	
SREF	6.1980
LREF	5.3130
BREF	5.3130
XMRP	2.5430
YMRP	.0000
ZMRP	.0000
SCALE	.0030





DATA SET SYMBOL: (DB3002) (CB3053)
CONFIGURATION DESCRIPTION: MSFC 570(IA31F)(03)/(I19)/(S3/2)/(S3/2)Y20
ORBITING: 500 21.000
SPACER: SPACIA .000
SPACAP: .050
REFERENCE INFORMATION:
SREF: 6.1830
LREF: 5.3130
BREF: 5.3130
XMRP: 2.5450
YMRP: .0000
ZMRP: .0000
SCALE: .0340



EFFECT ON ORBITER OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (063002)
 (063054)

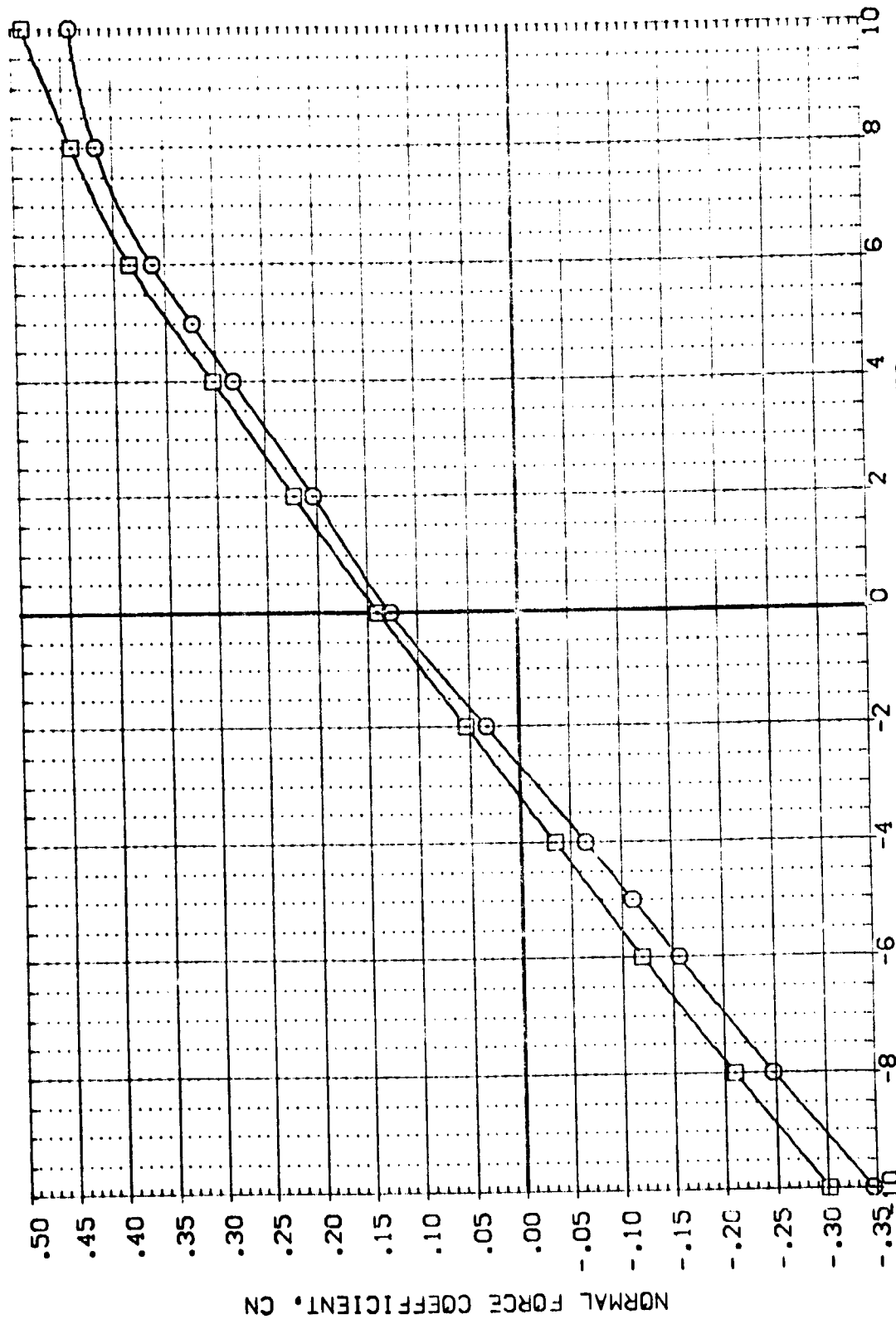
CONFIGURATION DESCRIPTION:
 MSFC 570(IASIF)(03)/(T9)/(S3/2)/(S3/2)
 MSFC 570(IASIF)(03)/(T9)/(S3/2)/(S3/2)Y30

SPACING: .500
 .500

SPADIA: .000
 .200

SPAGAP: .000
 .050

REFERENCE INFORMATION:
 SREF: 6.1990
 LREF: 5.3130
 BREF: 5.3130
 YMRP: 2.5490
 ZMRP: .0000
 SCALE: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

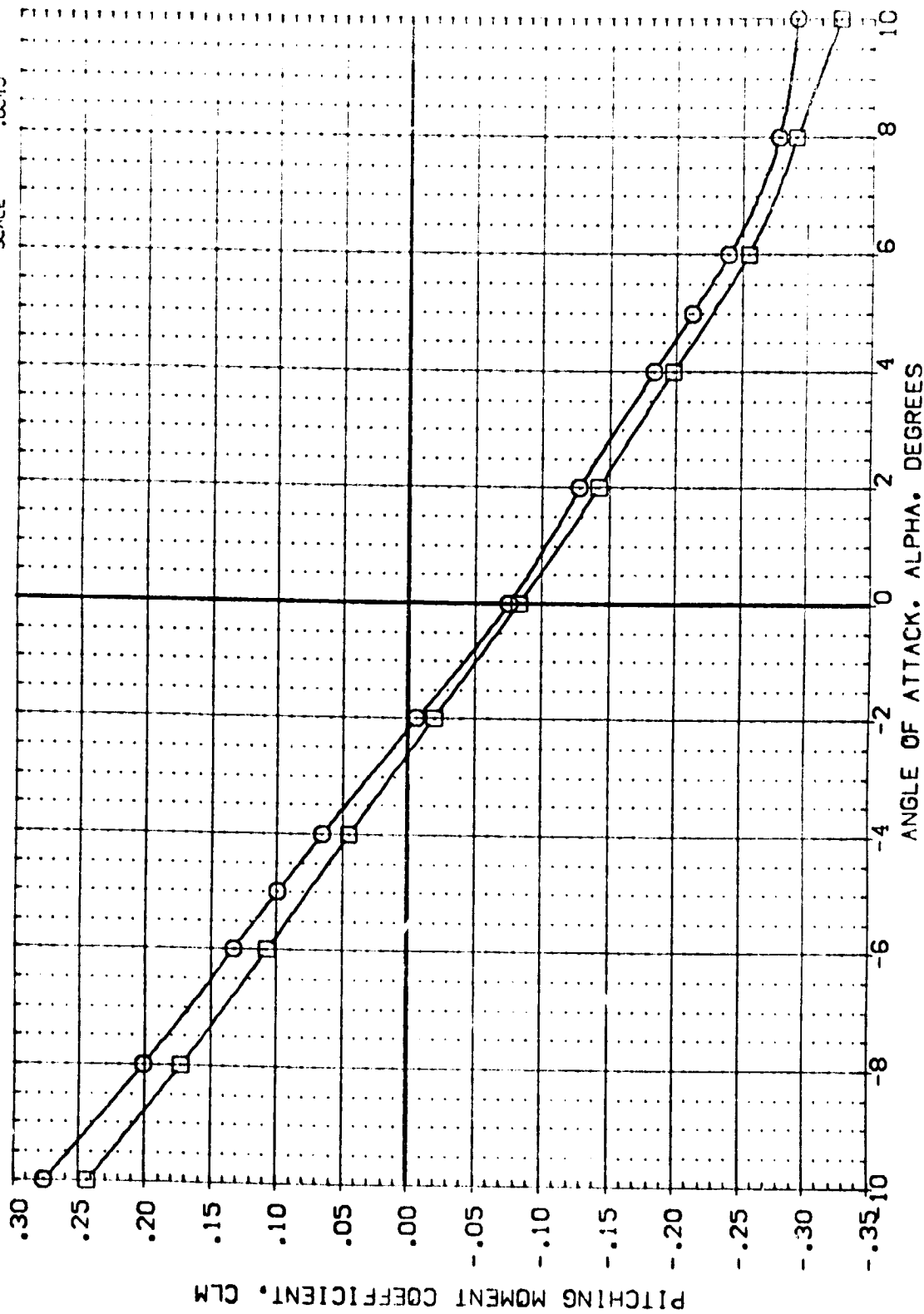
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (080002) ☐ MSFC 570((A31F)(03))/(19)/(S3/2)/(S3/2)
 (C80054) ☐ MSFC 570((A31F)(03))/(19)/(S3/2)/(S3/2) V30

CRBINC SPACER SPADIA SPAGAP
 .500 .000 .000 .000
 .500 .220 .200 .050

REFERENCE INFORMATION
 SREF S11980
 LREF S13130
 BREF S13130
 XREF S13130
 YREF S15490
 ZREF .0000
 ZMRP .0000
 SCALE .0010



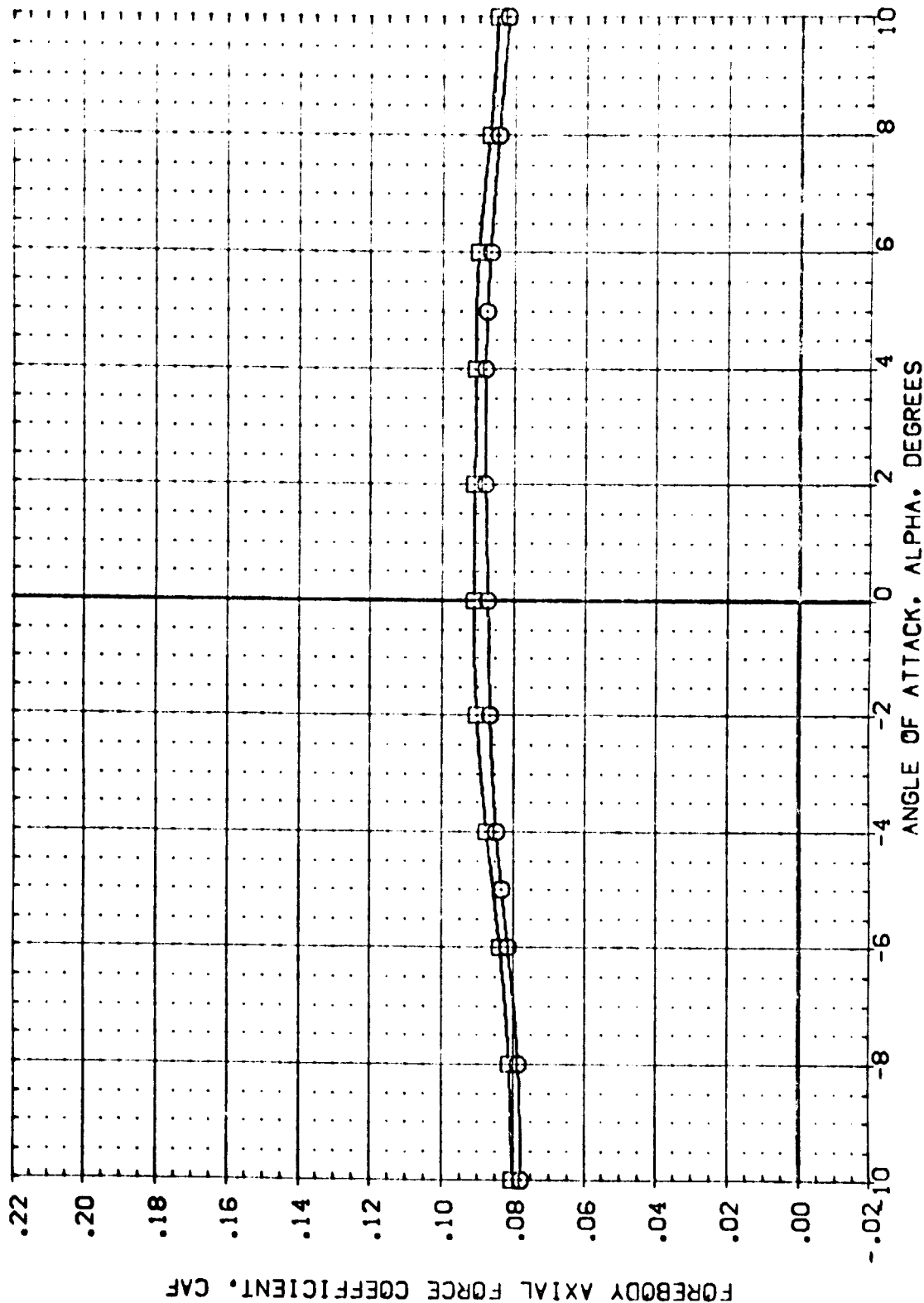
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (D80002) (D80054) CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)Y30

ORBITING: .500 SPACER: .000 SPADIA: .000 SPAGAP: .000 .050

REFERENCE INFORMATION: SREF: 6.1980 SQ: IN LREF: 5.3130 BREF: 5.3130 XMRP: 2.5490 YMRP: .0000 ZMRP: .0000 SCALE: .0010



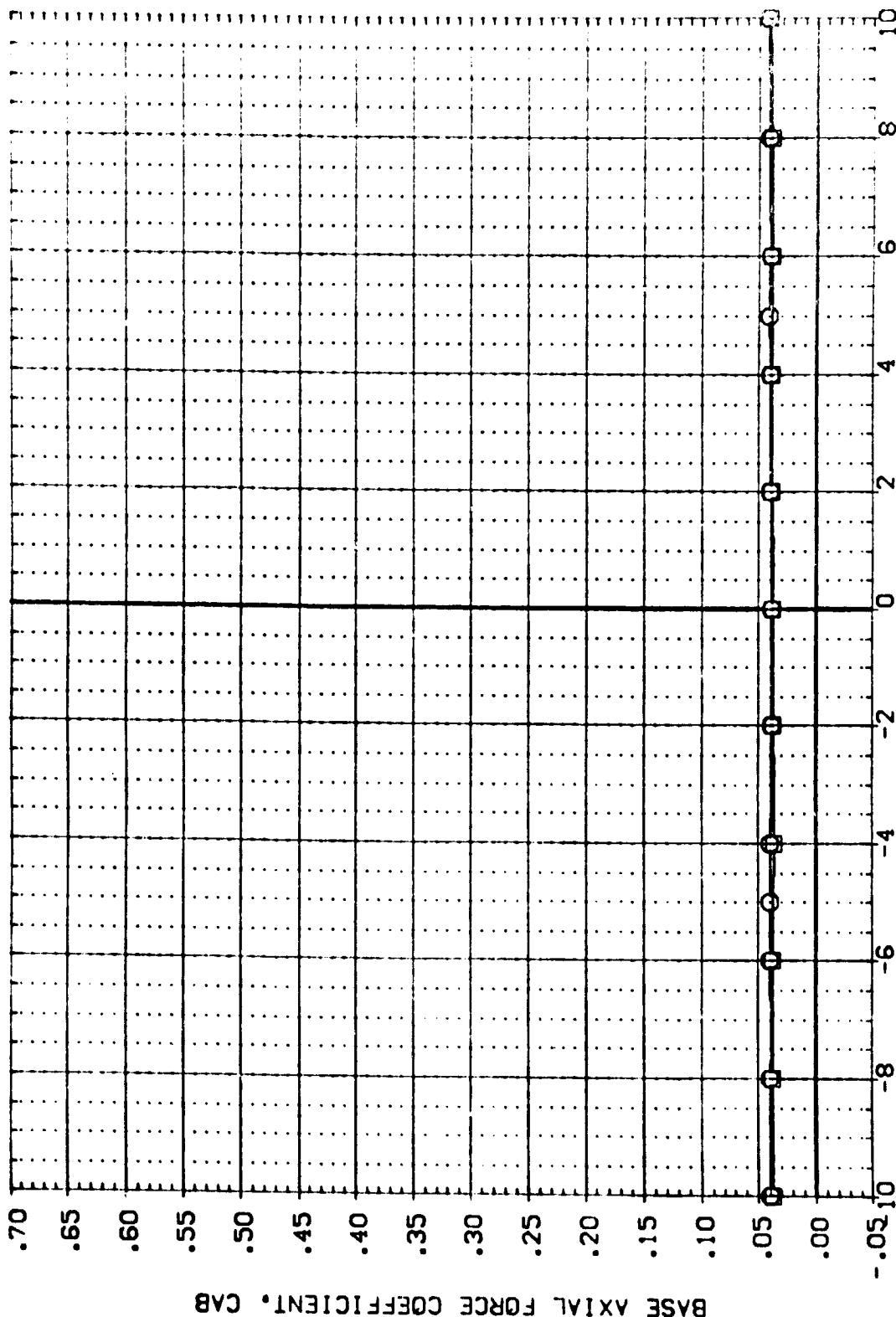
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET 51-80L UNCONFIGURATION DESCRIPTION
 (080002) MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)
 (080054) MSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)Y30

ORBITING SPACER SPADIA SPADAP
 .500 .000 .000
 .500 .220 .050

REFERENCE INFORMATION
 CREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 SREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



ANGLE OF ATTACK, ALPHA, DEGREES

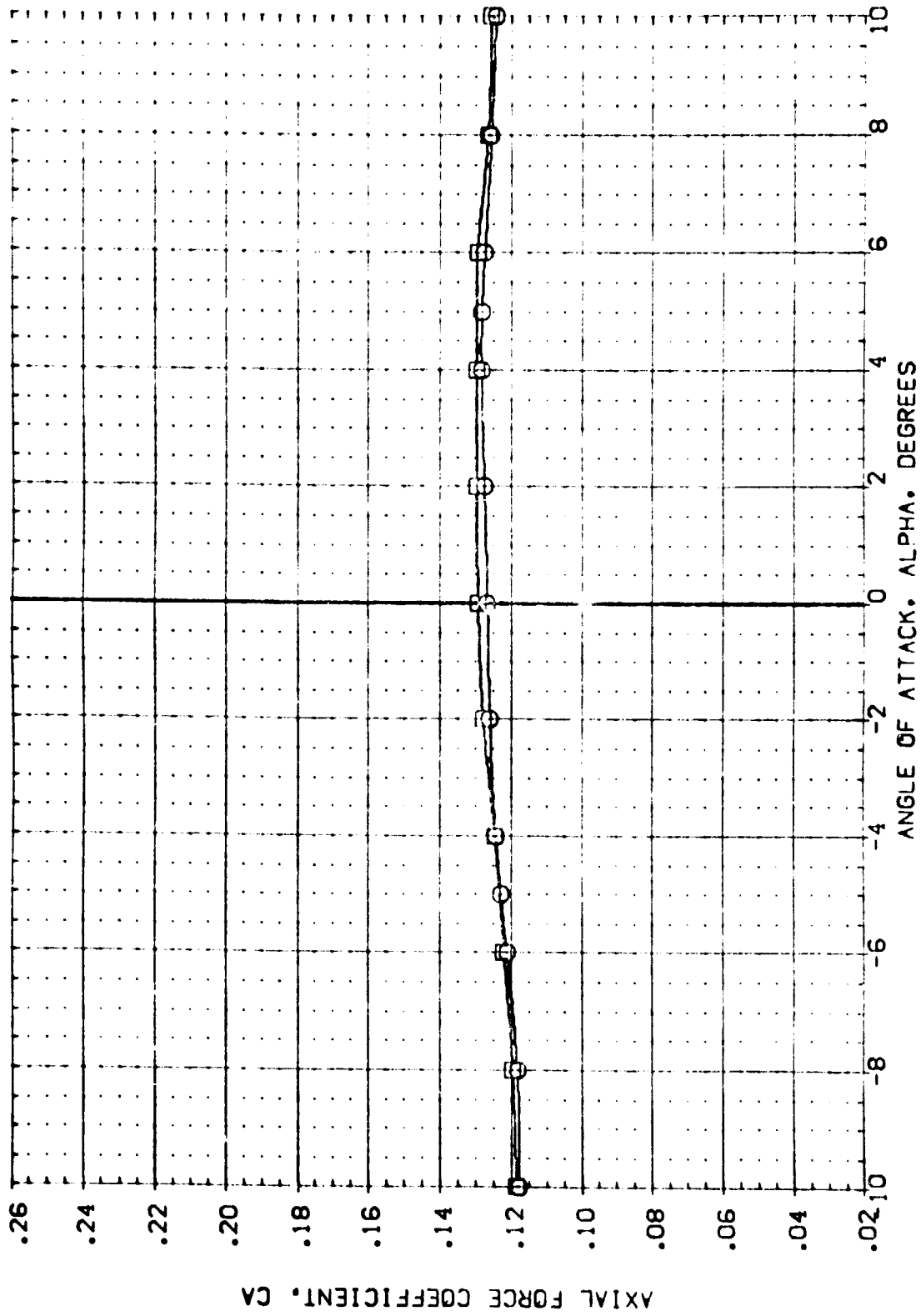
EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (060002) (060004)
 CONFIGURATION DESCRIPTION:
 MSFC 570(A3:F)(C3)/(T9)/(S3/2)/(S3/2)
 MSFC 570(A3:F)(C3)/(T9)/(S3/2)/(S3/2)Y30

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .220 .050

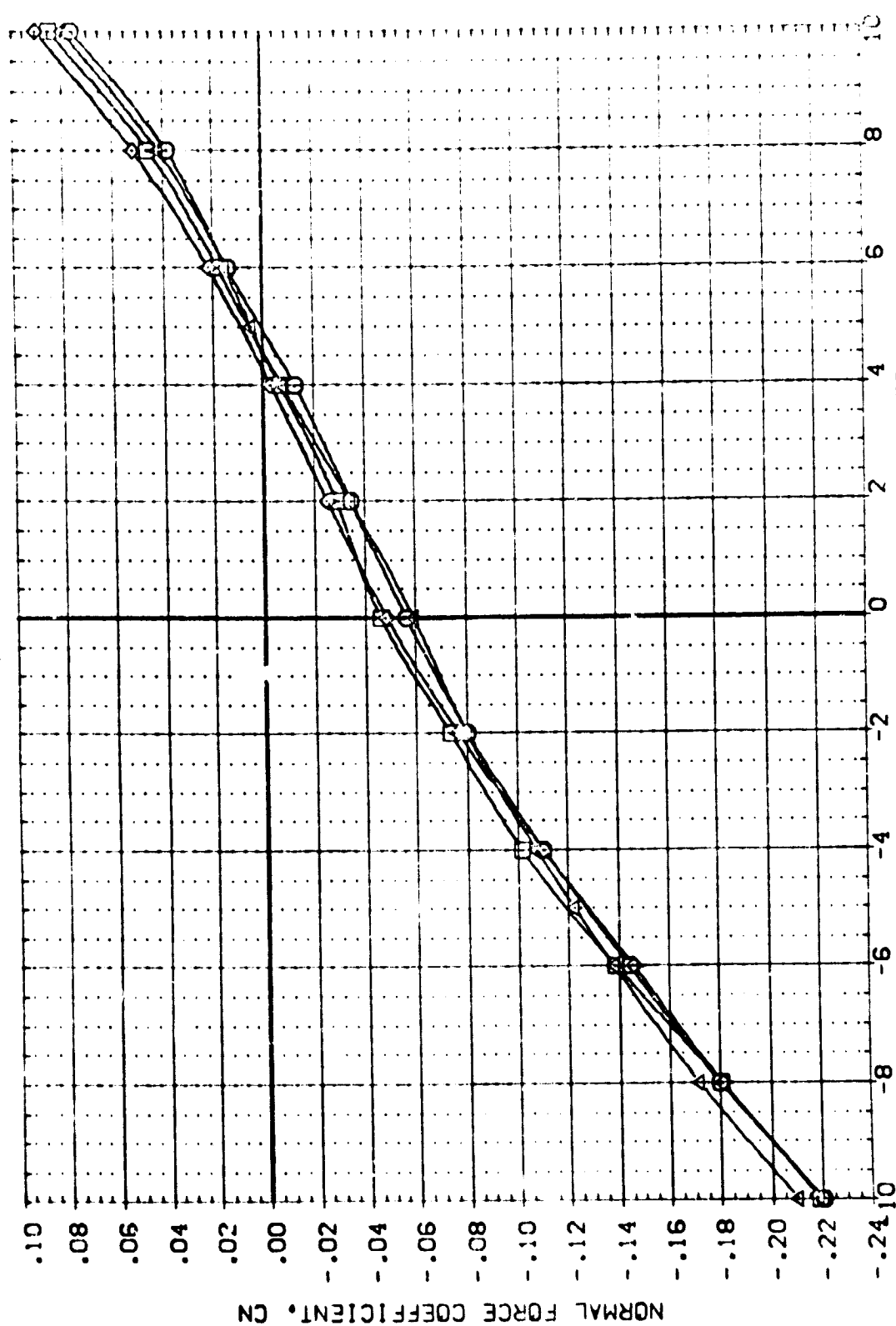
REFERENCE INFORMATION:
 SREF 6.1990 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0010



EFFECT ON ORBITER OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	SPACING	SPACER	SPACIA	SPAGAP	SCALE
(083140)	MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VIE	.500	7.000	.100	.000	5.000
(083141)	MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VIE	.500	9.100	.200	.000	5.000
(083142)	MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VIE	.500	11.100	.300	.000	5.000
(083102)	MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VIE	.500	.000	.000	.000	5.000



EFFECT ON ET OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

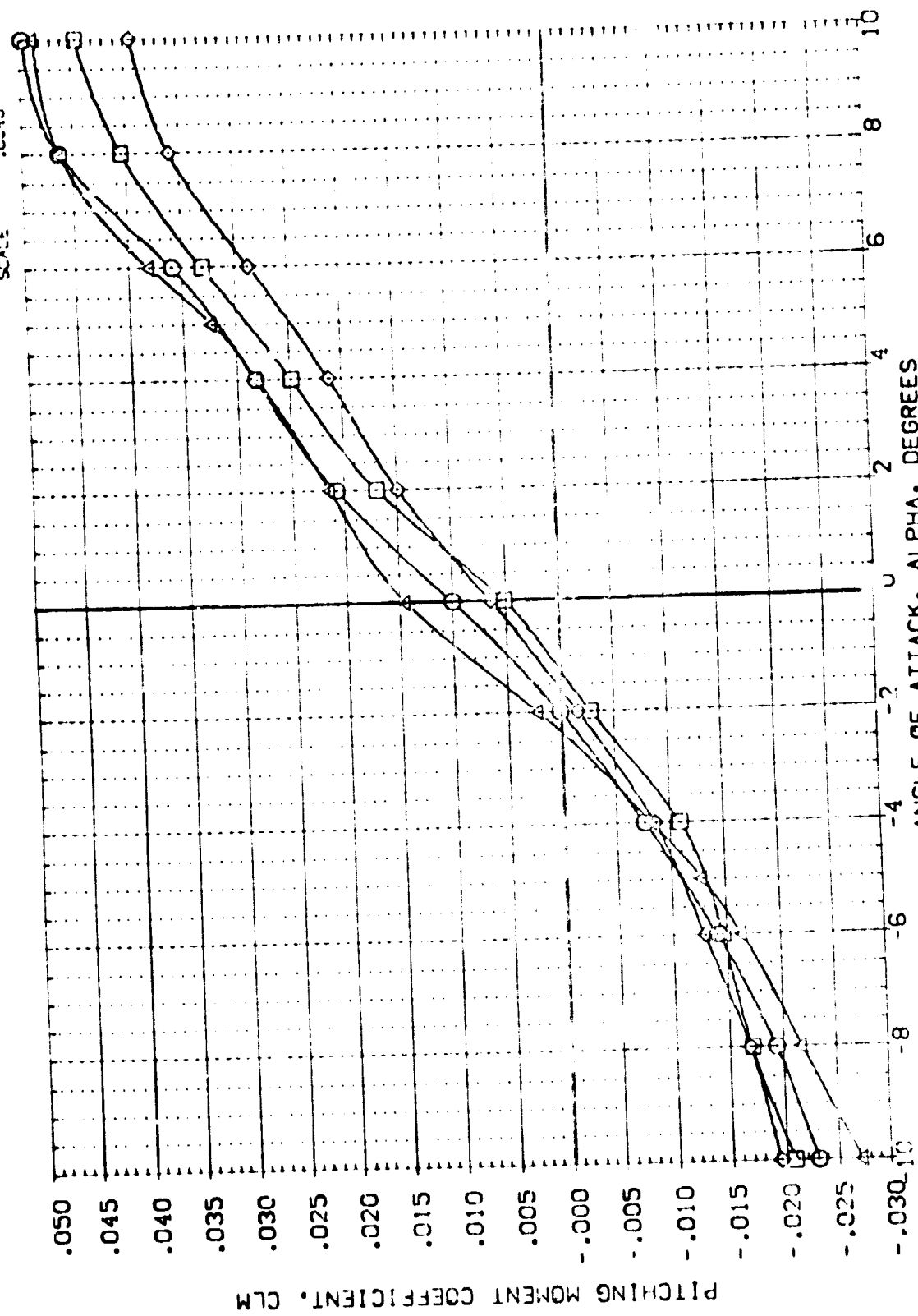
DATA SET SYMBOL: \square \times

CONFIGURATION DESCRIPTION:

MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VE
 (03/40)
 MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VE
 (03/41)
 MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)VE
 (03/42)
 MSFC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)
 (03/02)

DRB INC SPACER SPADIA SPADAP REFERENCE INFORMATION

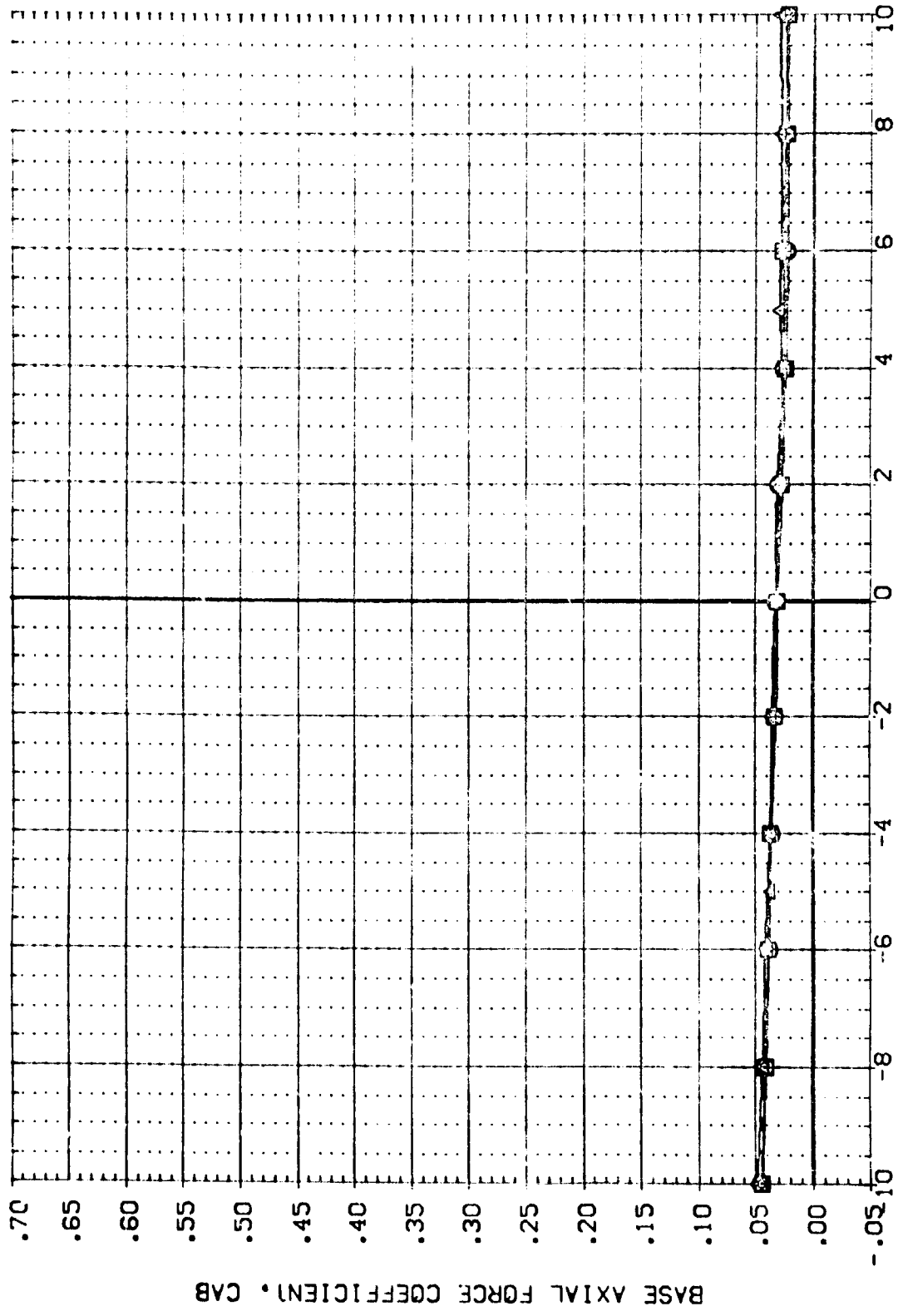
500 7.800 .100 .050 SREF 5.1980
 500 9.100 .200 .050 LREF 5.2130
 500 11.120 .300 .050 BREF 5.2330
 500 .000 .000 .000 XMAP 5.4500
 500 .000 .000 .000 YMAP 5.0000
 500 .000 .000 .000 ZMAP 5.0000
 SCALE 00.40



EFFECT ON ET OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(083140)	Q	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)Y1E	.500	7.800	.100	.050	SREF 6.1980 SQ. IN
(083141)	Q	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)Y1E	.500	9.100	.200	.050	LREF 5.3130
(083142)	Q	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)Y1E	.500	11.120	.300	.050	BREF 5.3130
(083102)	Q	MSFC 5701(A31F)(T9)/(03)/(S3/2)/(S3/2)	.500	.000	.000	.000	NMRP 2.5490
							ZMRP .0000
							SCALE .0040



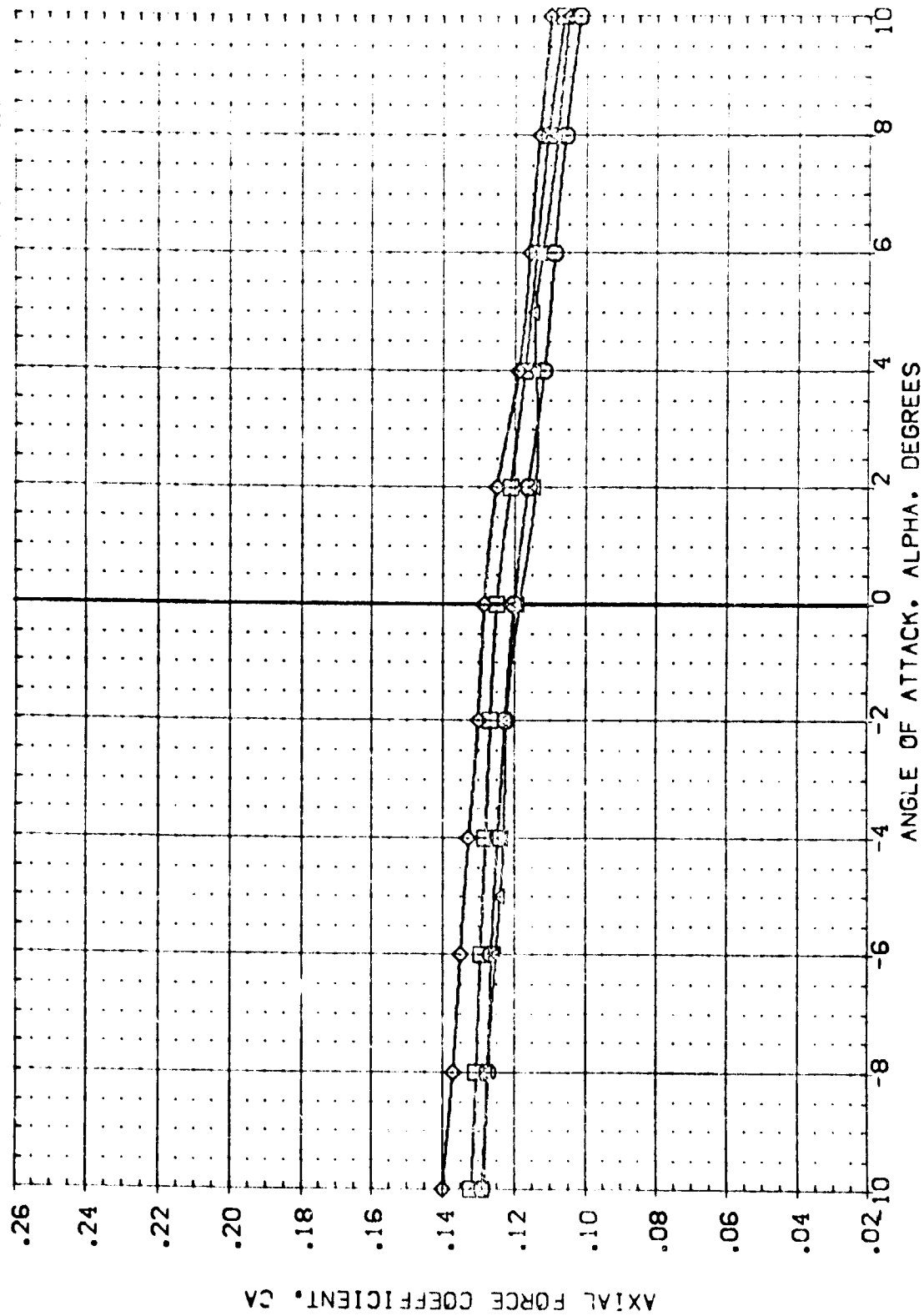
EFFECT ON ET OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

[illegible]

ORBITING	SPACER	SPADIA	SPAGAP
.500	7.800	.100	.050
.500	9.100	.200	.050
.500	11.120	.300	.050
.500	.000	.000	.000

REFERENCE INFORMATION	
DATE	6.1.80
TIME	5.31.30
OFF	5.31.30
XG0	2.54.00
Y00	.0000
Z00	.0000
SCALE	.0040



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(C83T41)	MSFC 570(.31F)(T9)/(O3)/(S3/2)/(S3/2)YIE	.500	9.100	.200	.050	SREF 5.1980
(C83T43)	MSFC 570(.31F)(T9)/(O3)/(S3/2)/(S3/2)YIE	.500	13.140	.200	.100	LREF 5.3130
(C83T02)	MSFC 570(.31F)(T9)/(O3)/(S3/2)/(S3/2)YIE	.500	.000	.000	.000	BREF 5.3130
						XMRP 2.5450
						YMRP .0000
						ZMRP .0000
						SCALE .0010



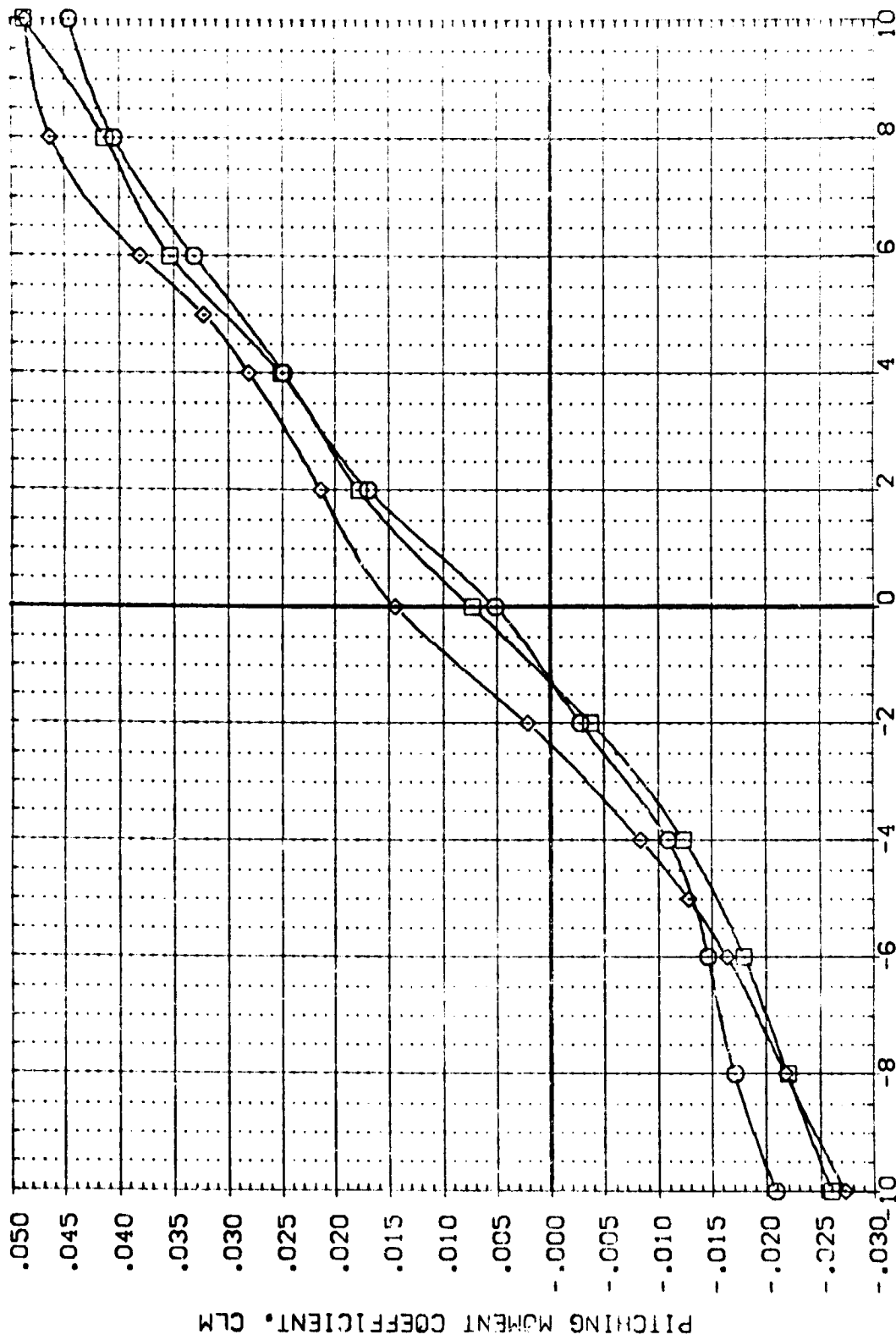
EFFECT ON ET OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83T41) MSFC 570(IA31F)(T9)/(O3)/(S3/2)/(S3/2)YIE
 (C83T43) MSFC 570(IA31F)(T9)/(O3)/(S3/2)/(S3/2)YIE
 (D83T02) MSFC 570(IA31F)(T9)/(O3)/(S3/2)/(S3/2)

ORBITAL SPACER SPADIA SPAGAP
 .500 9.100 .200 .050
 .500 13.140 .200 .100
 .500 .000 .000 .000

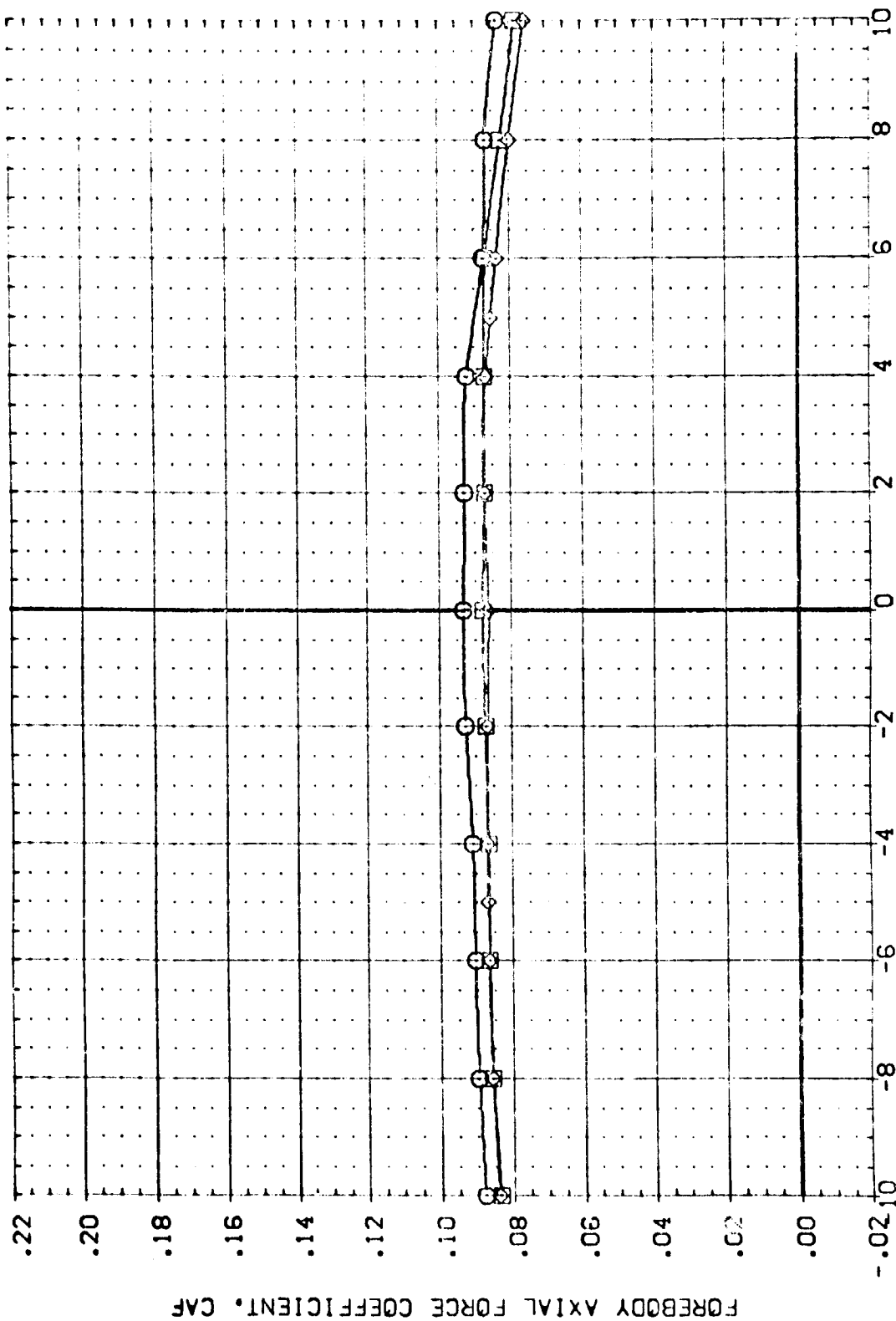
REFERENCE INFORMATION
 SREF 6.1000
 LREF 5.2130
 BREF 5.2130
 YMRP 2.5490
 ZMRP .0000
 SCALE .0010



EFFECT ON ET OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(083T41)	MSFC 570([A31F])(T9)(Q3)/(S3/2)/(S3/2)Y1E	.500	9.100	.200	.050	SREF 5.1980
(083T43)	MSFC 570([A31F])(T9)(Q3)/(S3/2)/(S3/2)Y1E	.500	13.140	.200	.100	LREF 5.3130
(083T02)	MSFC 570([A31F])(T9)(Q3)/(S3/2)/(S3/2)	.500	.000	.000	.000	BREF 2.5450
						XMRP .0000
						YMRP .0000
						ZMRP .0000
						SCALE .0010



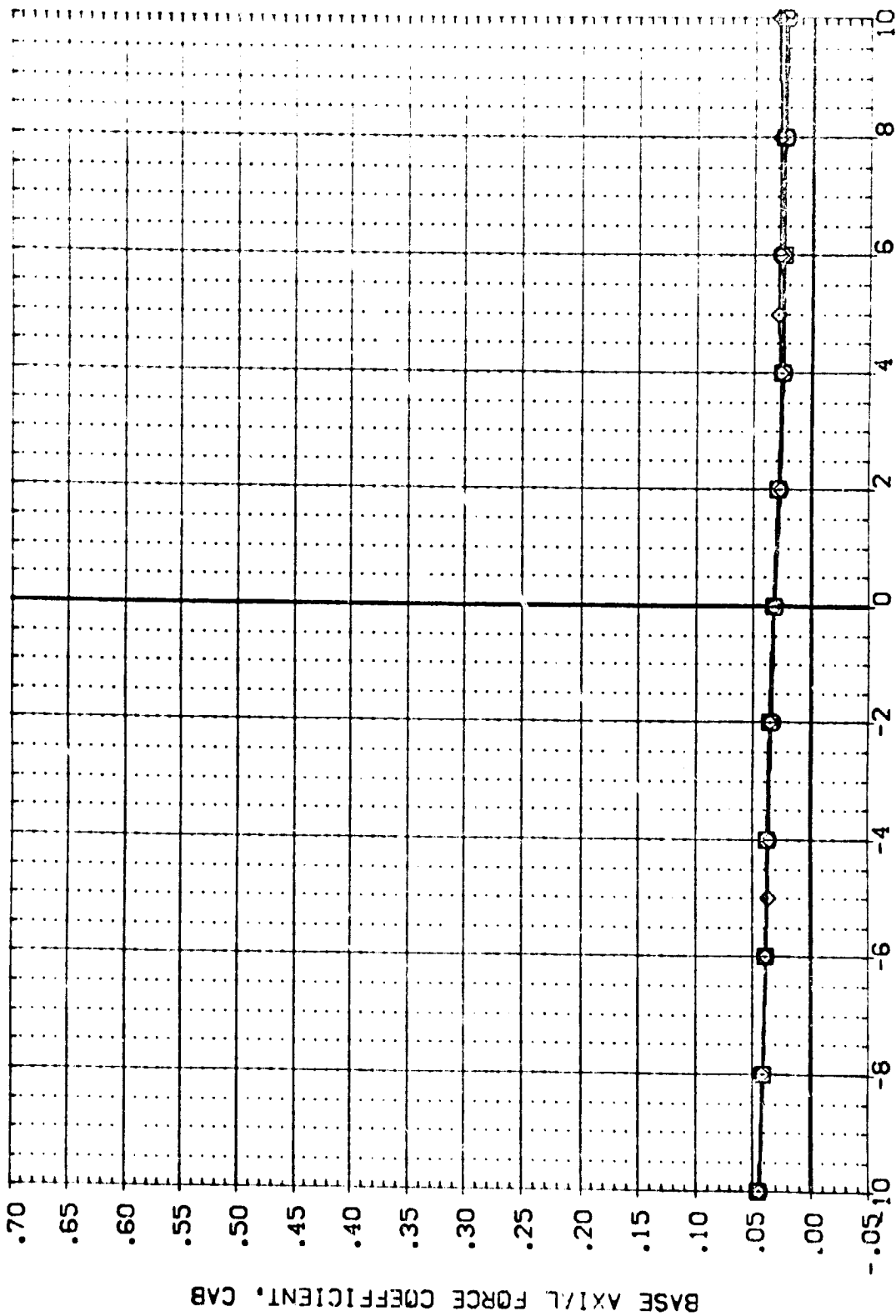
EFFECT ON ET OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(M)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83T14) MSFC 570((A31F)(T9))((03))((S3/2))((S3/2))VIE
 (C83T13) MSFC 570((A31F)(T9))((03))((S3/2))((S3/2))VIE
 (C83T02) MSFC 570((A31F)(T9))((03))((S3/2))((S3/2))VIE

ORBITAL SPACER SPADIA SPAGAP
 .500 9.100 .200
 .500 13.140 .200
 .500 .000 .000

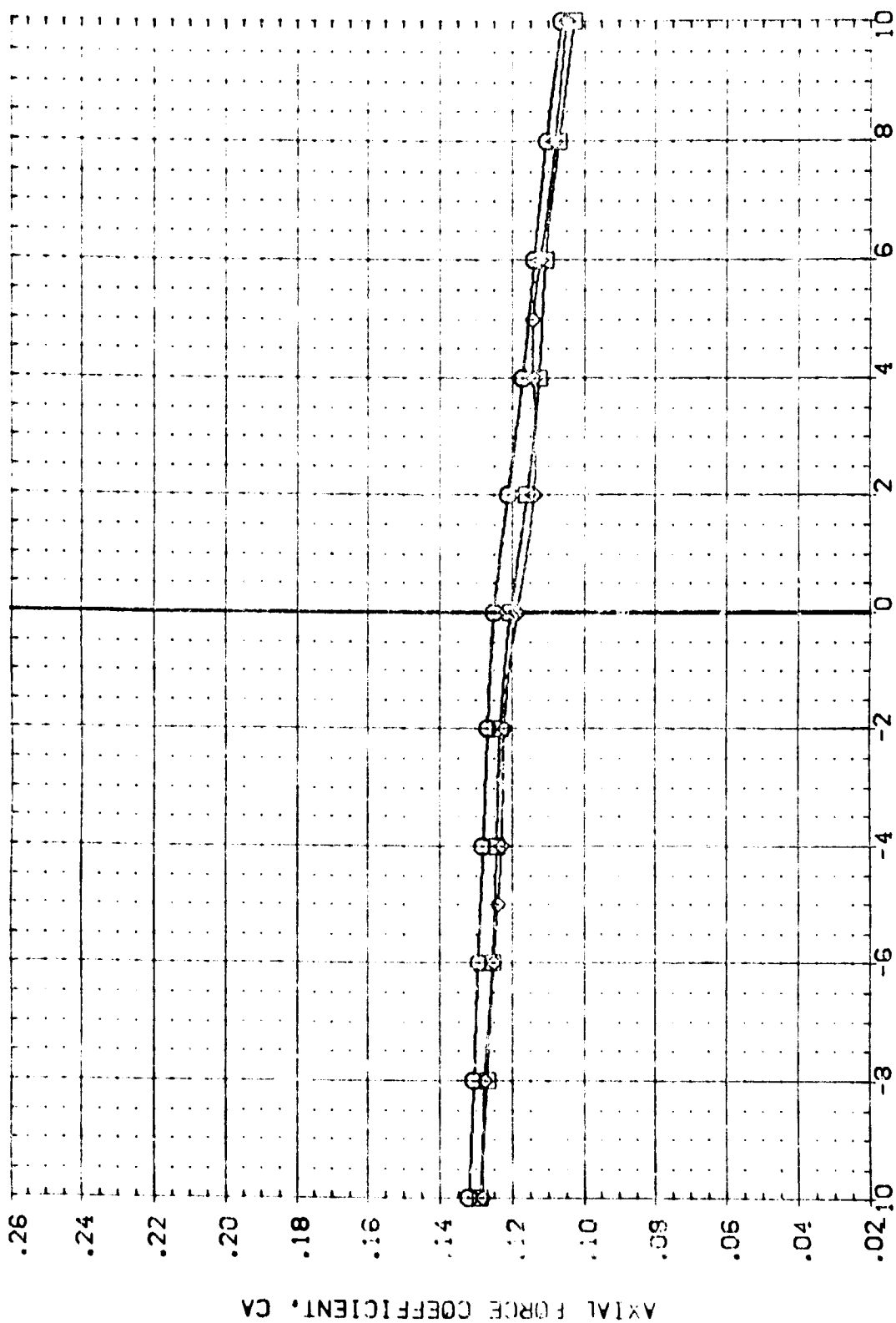
REFERENCE INFORMATION
 SREF 6.1530 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010



EFFECT ON ET OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	OPTIC	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(0831A)	MSFC 570 ((A31F)(T9)/(C3)/(S3/2))Y1E	.500	9.100	.200	.050	SREF 6.1980
(0831B)	MSFC 570 ((A31F)(T9)/(C3)/(S3/2))Y1E	.500	13.140	.200	.100	LREF 5.3130
(0831C)	MSFC 570 ((A31F)(T9)/(C3)/(S3/2))Y1E	.500	.000	.000	.000	BREF 5.3130
						XMRP 2.5450
						YMRP .0000
						ZMRP .0000
						SCALE .0040



EFFECT ON ET OF SPACER GAP - ATTACHED FORE AND AFT TO ET

CAMMACH = 1.25

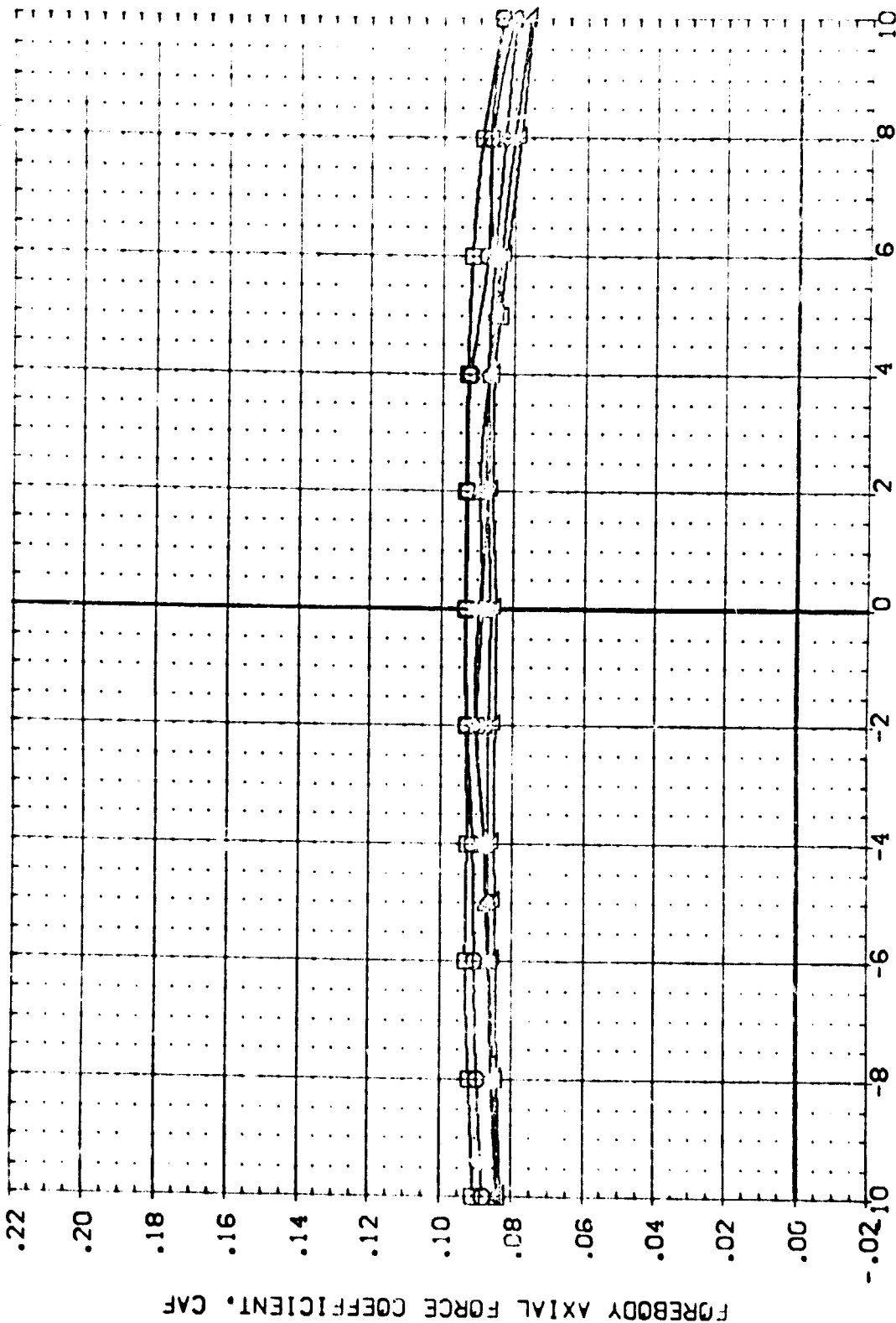
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(CB3741)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	.500	.140	.200	.050	SREF 5.1980 SQ: 1
(CB3741)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	1.500	.140	.200	.050	UREF 5.3130
(CB3745)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	-.500	.140	.200	.050	BREF 5.3130
(CB3702)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	.500	.140	.000	.000	XREF 2.5450
(CB3703)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	1.500	.140	.000	.000	YREF .0000
(CB3701)	MSFC 570((A31E)(T9)(S3/2)/(S3/2))YIE	-.500	.140	.000	.000	ZREF .0000
						SCALE .0010



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(MACH = 1.25)

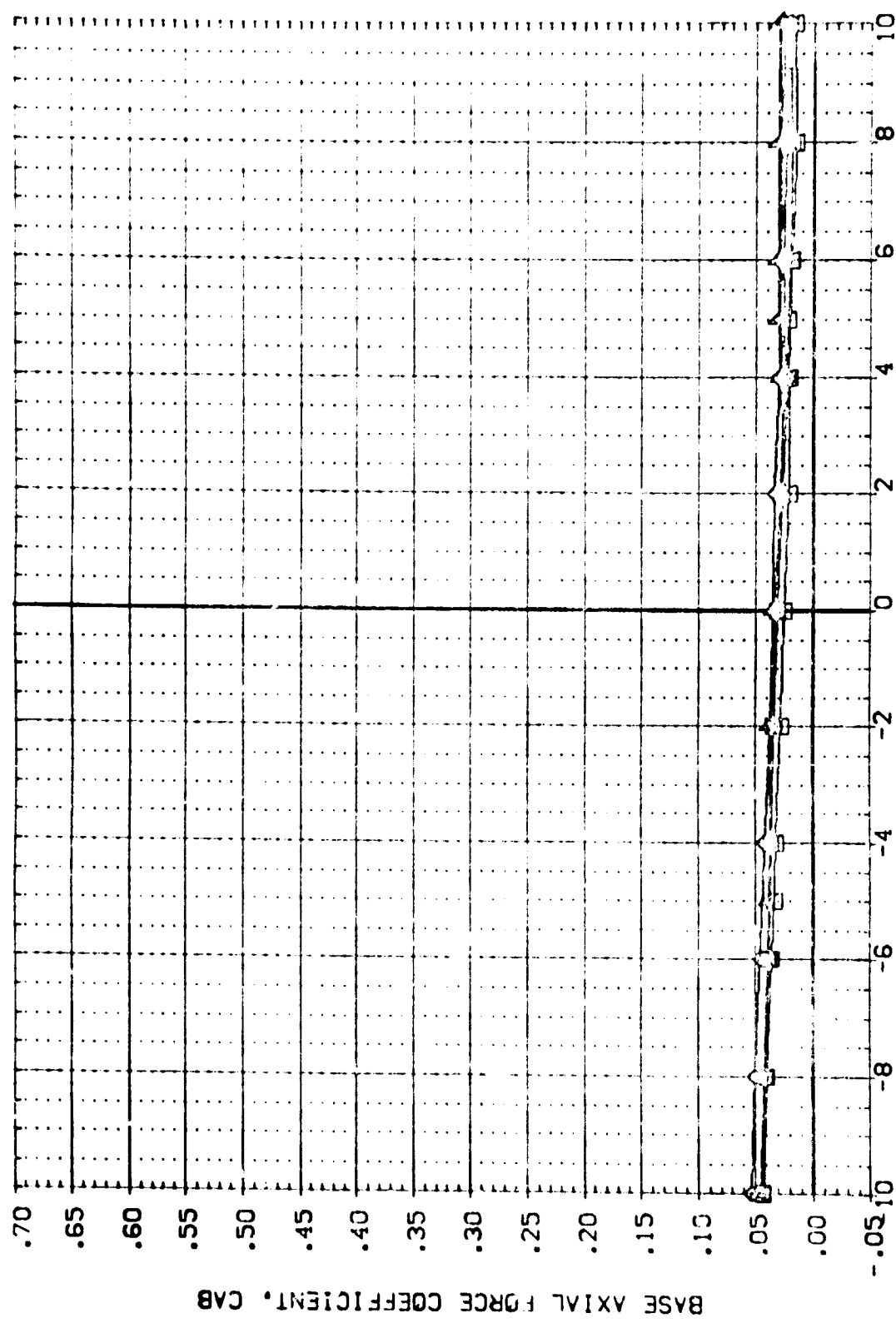
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
[033T41]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	.500	.140	.200	.050	SREF 6.1980 50. IN
[033T44]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	1.500	.140	.200	.050	LREF 5.3130 50. IN
[033T45]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	1.500	.140	.200	.050	BREF 5.3130 50. IN
[033T02]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	.500	.140	.000	.000	XMREF 2.5490 50. IN
[033T03]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	.500	.140	.000	.000	YMREF .0030 50. IN
[033T01]	MSC 570([A31F])(T9)/([03]/([S3/2])/([S3/2])Y1E	-.500	.140	.000	.000	ZMREF .0030 50. IN



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

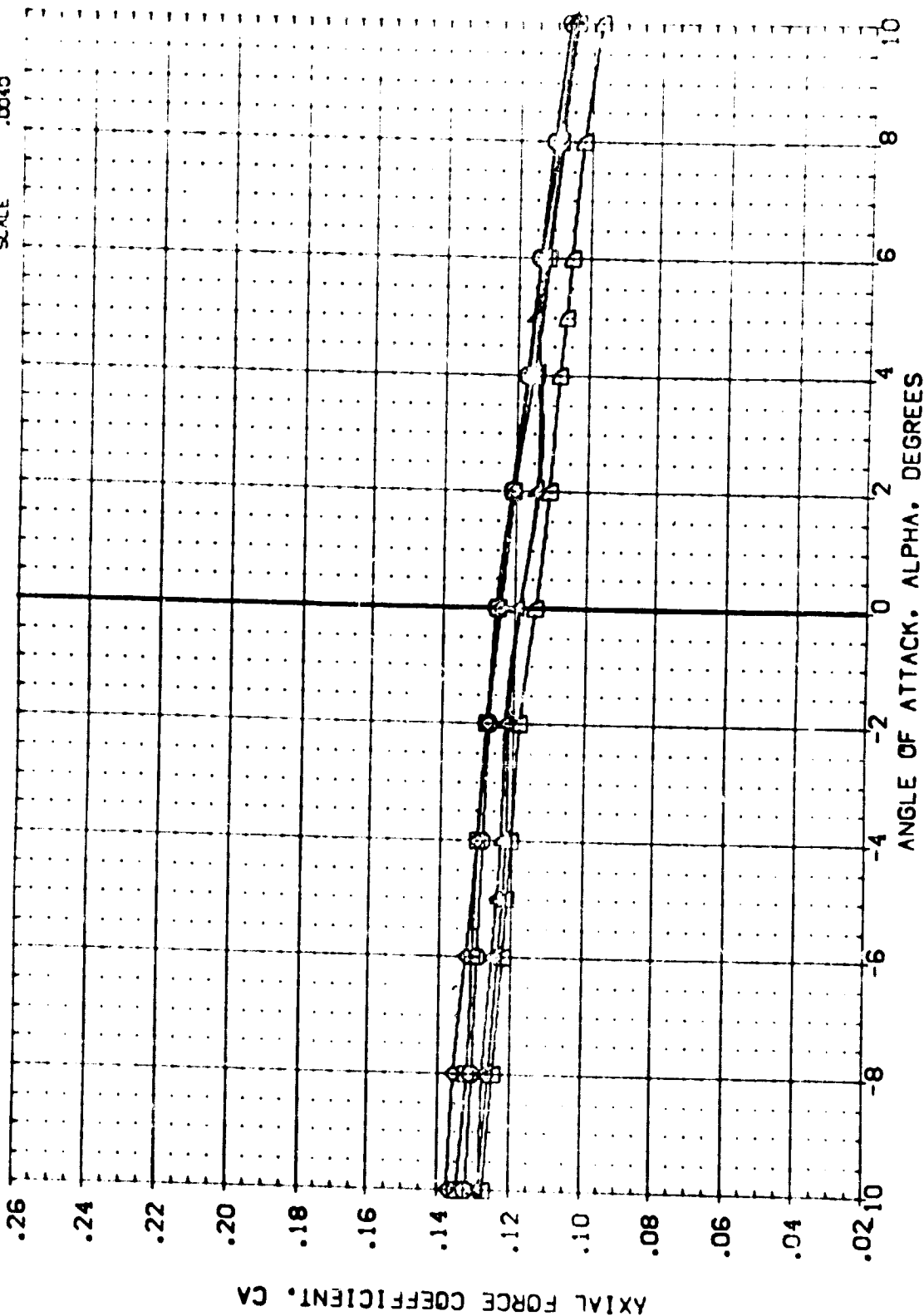
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
[03141]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	.500	.140	.200	.050	SREF 6.1980
[03144]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	1.500	.140	.200	.050	LREF 5.3130
[03145]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	-1.500	.140	.200	.050	SREF 5.3130
[03102]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	.500	.140	.000	.000	YMRP 2.5450
[03103]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	1.500	.140	.000	.000	ZMRP .0000
[03101]	MSFC 570((A31F))((9))((03))((S3/2))((S3/2))VIE	-1.500	.140	.000	.000	SCALE .0040



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

DATA SET SYMBO. CONFIGURATION DESCRIPTION ORB:INC DELTAZ SPADIA SPAGAP REFERENCE INFORMATION

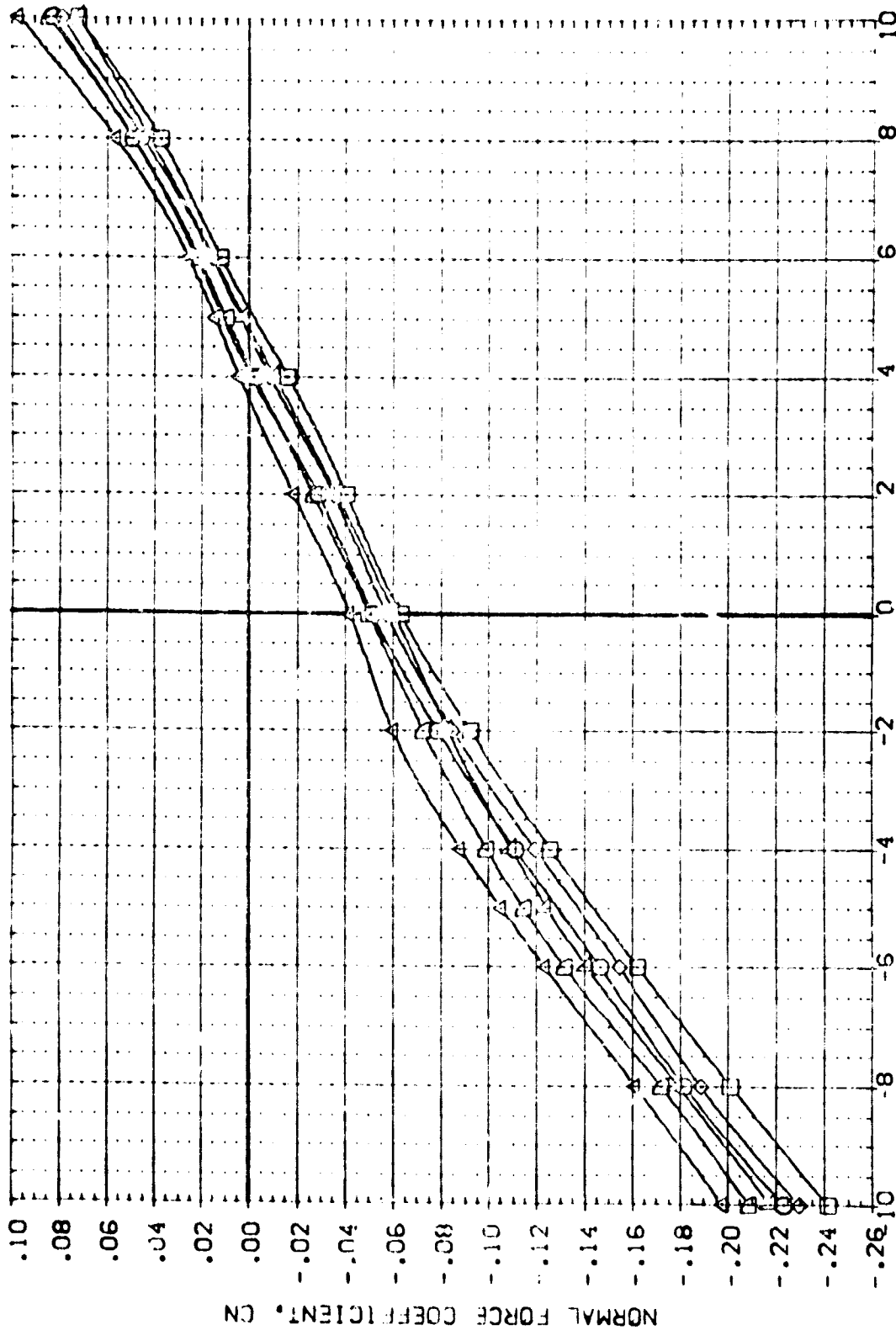
DATA SET SYMBO.	CONFIGURATION DESCRIPTION	ORB:INC	DELTAZ	SPADIA	SPAGAP	REFERENCE INFORMATION
(083141)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	.500	.140	.000	.050	SREF 6.1580
(083142)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	1.500	.140	.000	.050	LREF 5.3130
(083143)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	-1.500	.140	.000	.050	BREF 5.3130
(083102)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	.500	.140	.000	.000	XMRP 2.5450
(083103)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	1.500	.140	.000	.000	YMRP .0000
(083101)	MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)IIE	-1.500	.140	.000	.000	ZMRP .0000
						SCALE .0010



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	CORR INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
083146	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	SREF 6.1990
083147	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	LREF 5.3130
083148	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	BREF 5.3130
083149	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	AXREF 5.3130
083150	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	YREF 5.3130
083151	C	MSFC 5701(A31F)(3)/(03)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	SCALE .0010



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

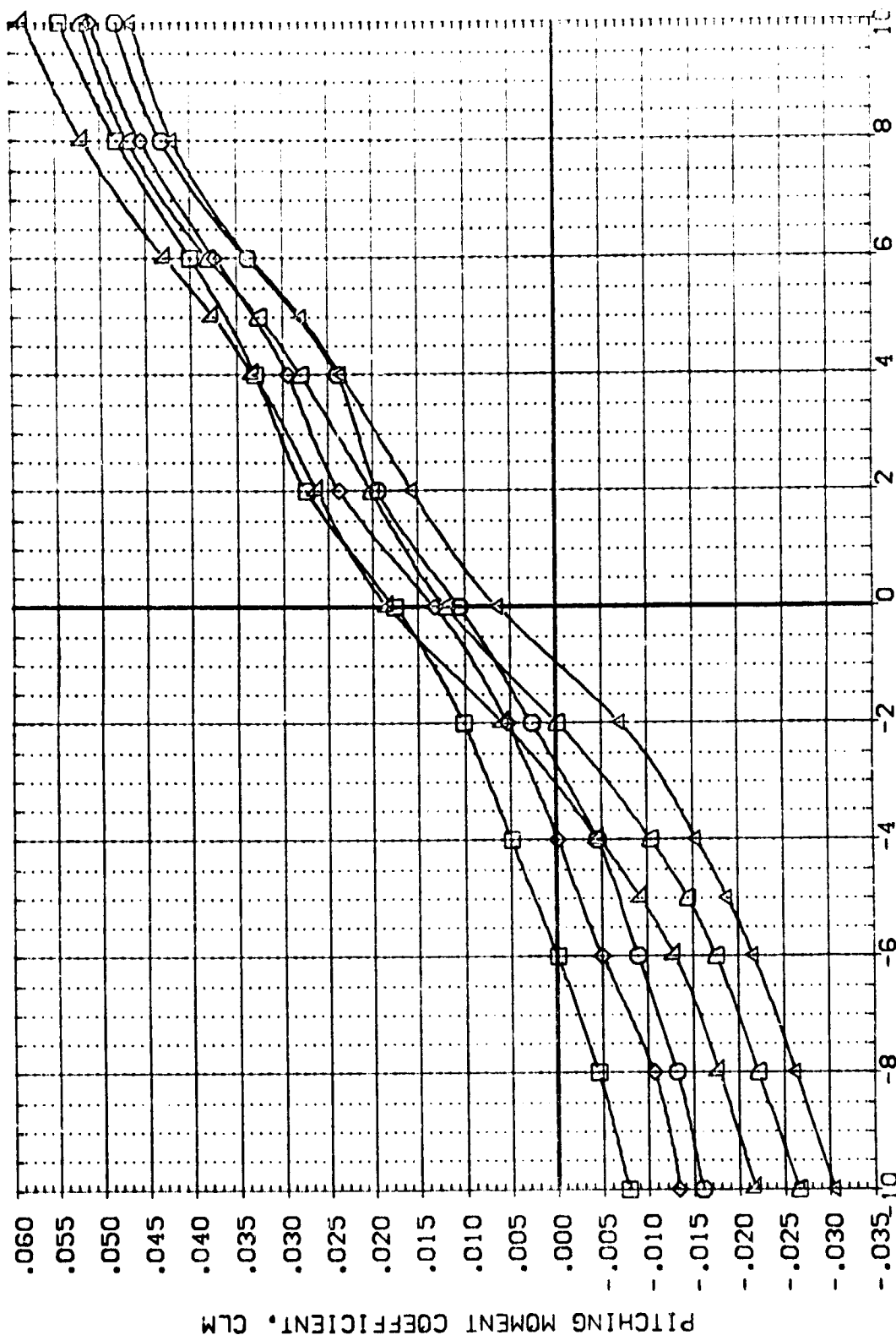
DATA SET SYMBOL

CONFIGURATION DESCRIPTION

MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E
MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E
MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E
MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E
MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E
MS-C 5701(A3)F[(TS),(O3),(S3/2),(S3/2)Y]E

	ORBITAL	DELTA Z	SPADIA	SPADAB
1	.500	.280	.200	.050
2	1.500	.280	.200	.050
3	.500	.280	.200	.050
4	1.500	.280	.200	.050
5	.500	.280	.200	.050
6	1.500	.280	.200	.050

REFERENCE INFORMATION		SO: IN
SREF	6.1980	..
LREF	5.3130	..
BREF	5.3130	..
XPRP	2.5490	..
YMRP	..0000	..
ZMRP	..0000	..
SCALE	..0010	..



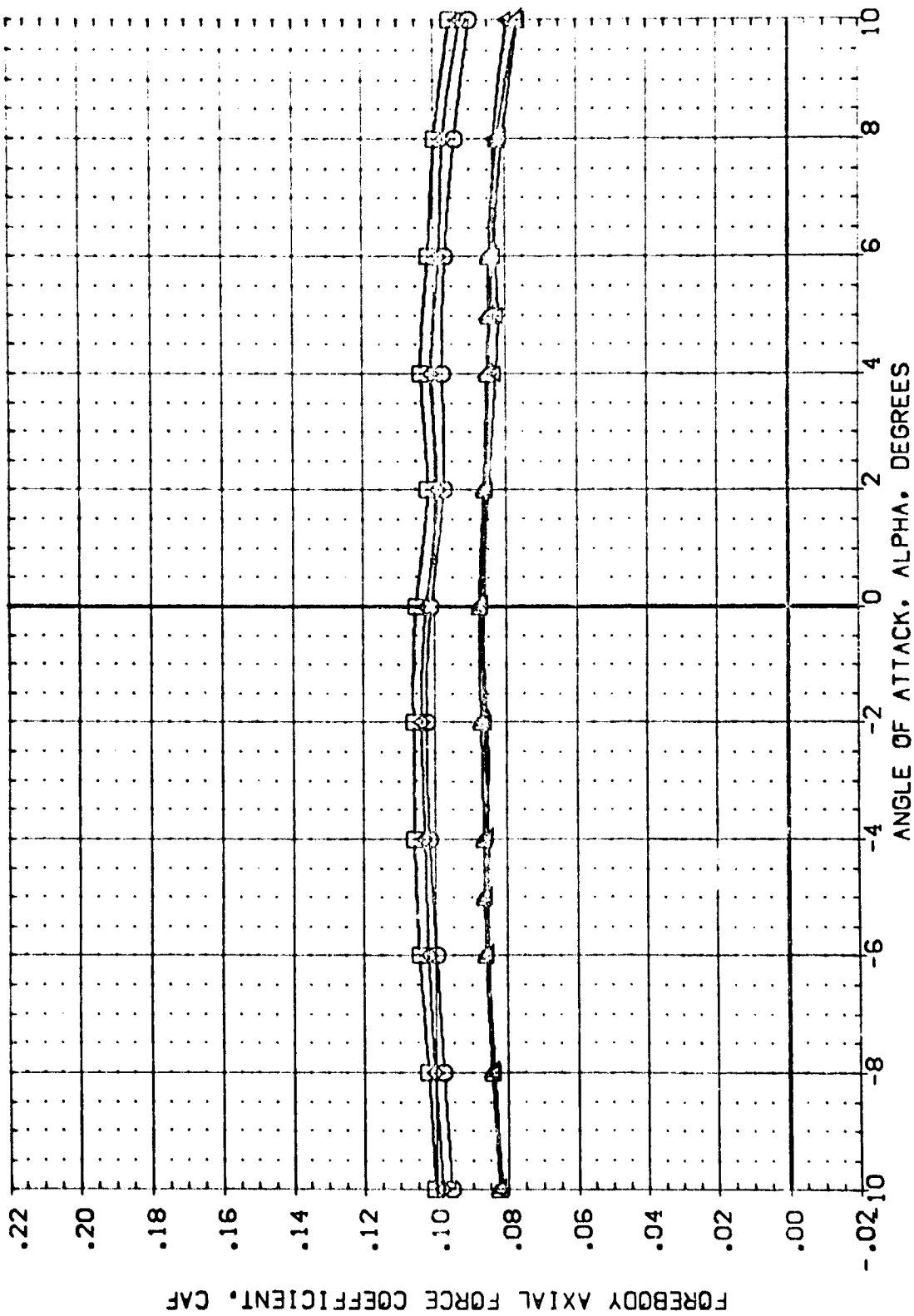
ANGLE OF ATTACK, ALPHA, DEGREES

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CA3MACH = 1.25
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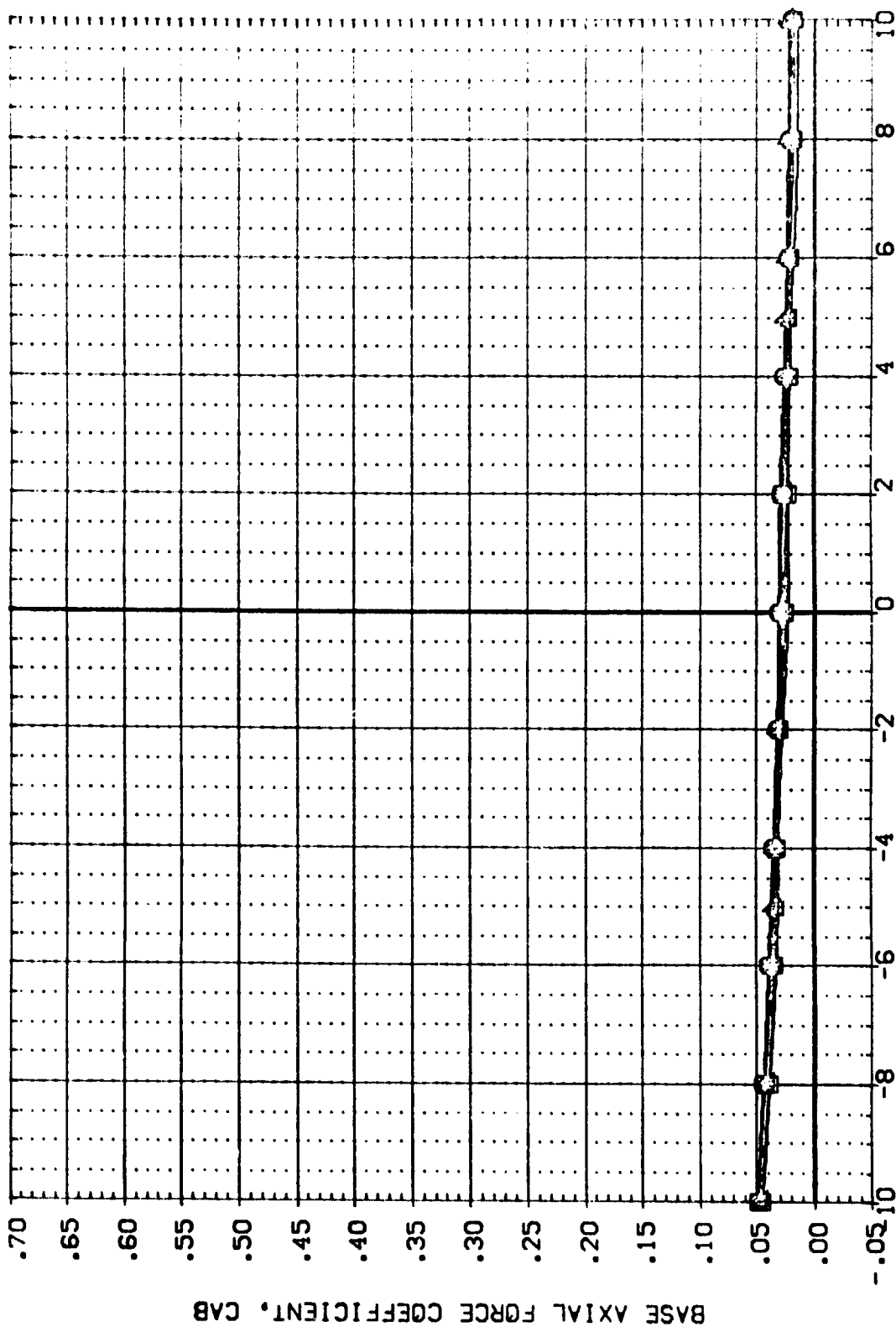
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(083T46)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	-500	.280	.200	.050	SREF 6.1980 SC IN
(083T47)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	1.500	.280	.200	.050	LREF 5.3130
(083T48)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	-500	.280	.200	.050	BREF 5.3130
(083T04)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	-500	.280	.000	.000	XMRP 2.3450
(083T05)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	1.500	.280	.000	.000	YMRP .0000
(083T05)	MSFC 570([A31F])(T9)([O3])([S3/2])([S3/2])VIE	1.500	.280	.000	.000	ZMRP .0000
						SCALE .0040



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION	SG. IN
(CBGT46)	MSFC S70((A3IF)(T9)/(03)/(S3/2)/(S3/2)11E	-1.500	.280	.000	.050	SREF	6.1980
(CBGT47)	MSFC S70((A3IF)(T9)/(03)/(S3/2)/(S3/2)11E	1.500	.280	.000	.050	LREF	5.3130
(CBGT48)	MSFC S70((A3IF)(T9)/(03)/(S3/2)/(S3/2)11E	-1.500	.280	.000	.050	BREF	5.3130
(CBGT04)	MSFC S70((A3IF)(T9)/(03)/(S3/2)/(S3/2)11E	-1.500	.280	.000	.000	XMRP	2.5490
(CBGT05)	MSFC S70((A3IF)(T9)/(03)/(S3/2)/(S3/2)11E	1.500	.280	.000	.000	YMRP	.0000
					.000	ZMRP	.0000
					.000	SCALE	.0040



EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(033T46)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)YIE	.500	.280	.200	.050	SREF 6.1980
(033T47)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)YIE	1.500	.280	.200	.050	LREF 5.3130
(033T48)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)YIE	.500	.280	.200	.050	BREF 5.3130
(033T04)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	.500	.280	.000	.000	YMRP 2.5480
(033T05)	MSFC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)	1.500	.280	.000	.000	ZMRP .0000
						SCALE .0040



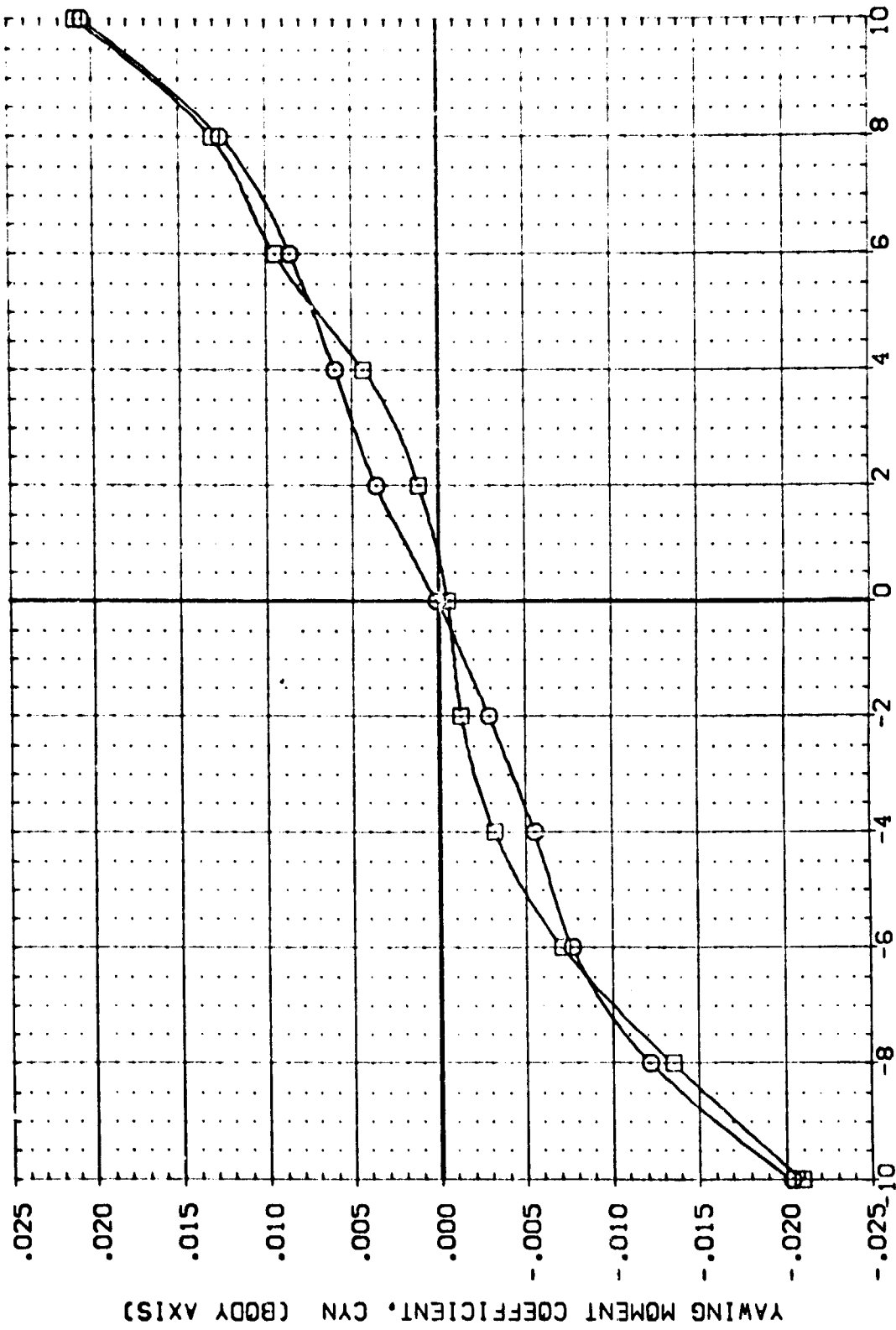
EFFECT ON ET OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(M)MACH = 1.25

DATA SET	SYMBOL	CONF	DURATION	DESCRIPTION
{ABGT49}				MFSC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)1E
{D83107}				MFSC 5701(A31F)(19)/(03)/(S3/2)/(S3/2)

DRBINC	SPACER	SPADIA	SPAGAP
.500	9.100	.200	.050
.500	.000	.000	.000

REFERENCE INFORMATION	
	SQ. IN.
SREF	6.1980
LREF	5.3130
BREF	5.3130
XGRP	2.5450
YGRP	.0000
ZGRP	.0000
SCALE	.0040



SIDELIP ANGLE, BETA, DEGREES

EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED TO ET

PAGE 509

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(A83T49)	MSFC 570/(A31F)/(T9)/(03)/(S3/2)/(S3/2)/YE
(D83T07)	MSFC 570/(A31F)/(T9)/(03)/(S3/2)/(S3/2)

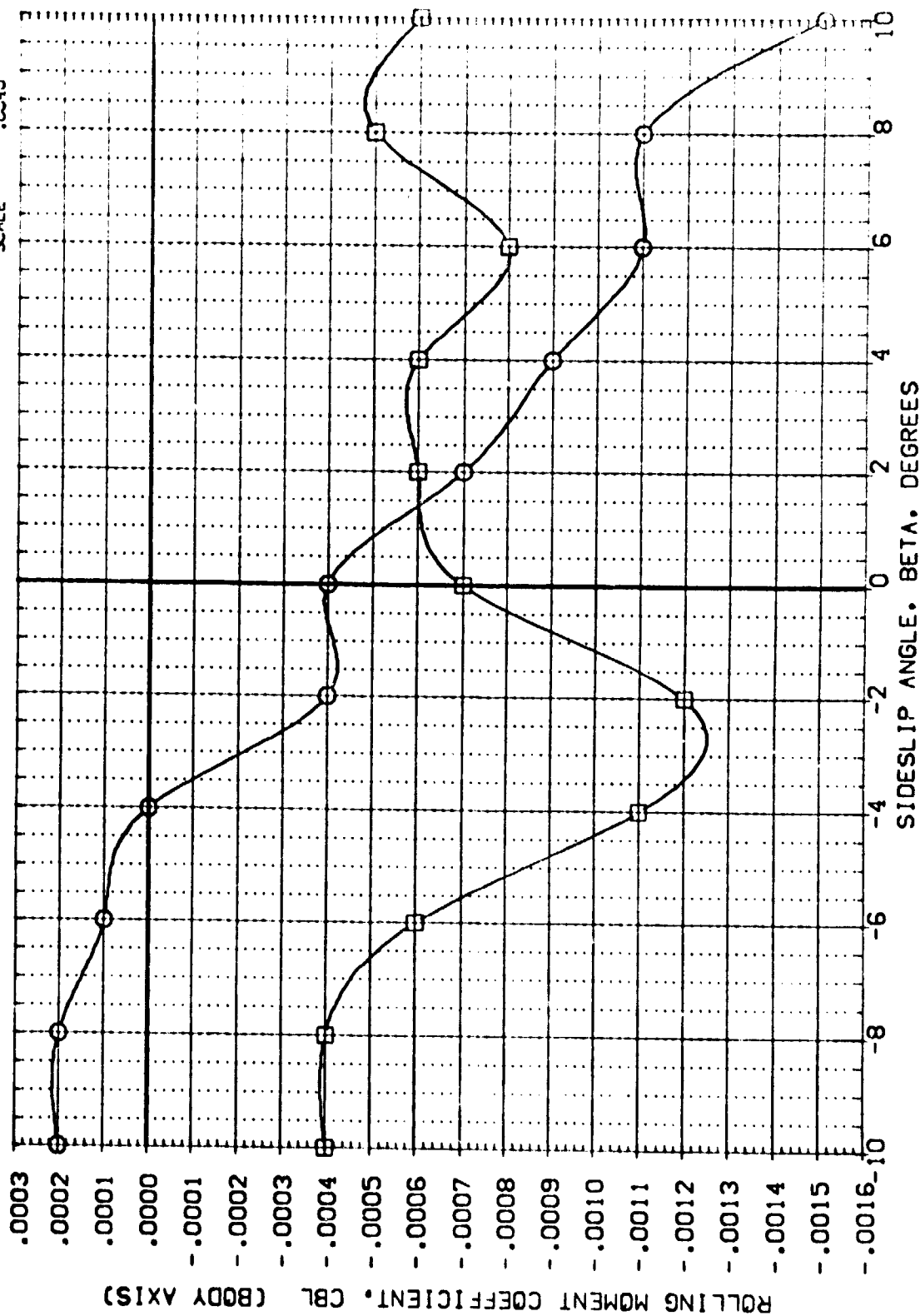
[illegible]

MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)YIE
MSFC 570(I A31F)(T9)/(O3)/(S3/2)/(S3/2)

DATA SET SYMBOL
(A83T49)
(D83T07)

	SPACING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	SZ.	IN
	.500	9.100	.200	-.050	SREF	6.1880	
	.500	.000	.000	.000	LREF	5.3130	
					BREF	5.3130	7.7
					XTRP	5.5450	7.7
					YTRP	.0000	7.7
					ZTRP	.0000	7.7
					SCALE	.0040	7.7

REFERENCE INFORMATION	
SREF	6.1980
LREF	5.3130
BREF	5.3130
XMRP	2.5490
YMRP	.0000
ZMRP	.0000
SCALE	.0040



EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED TO ET

CAMACH = 1.26

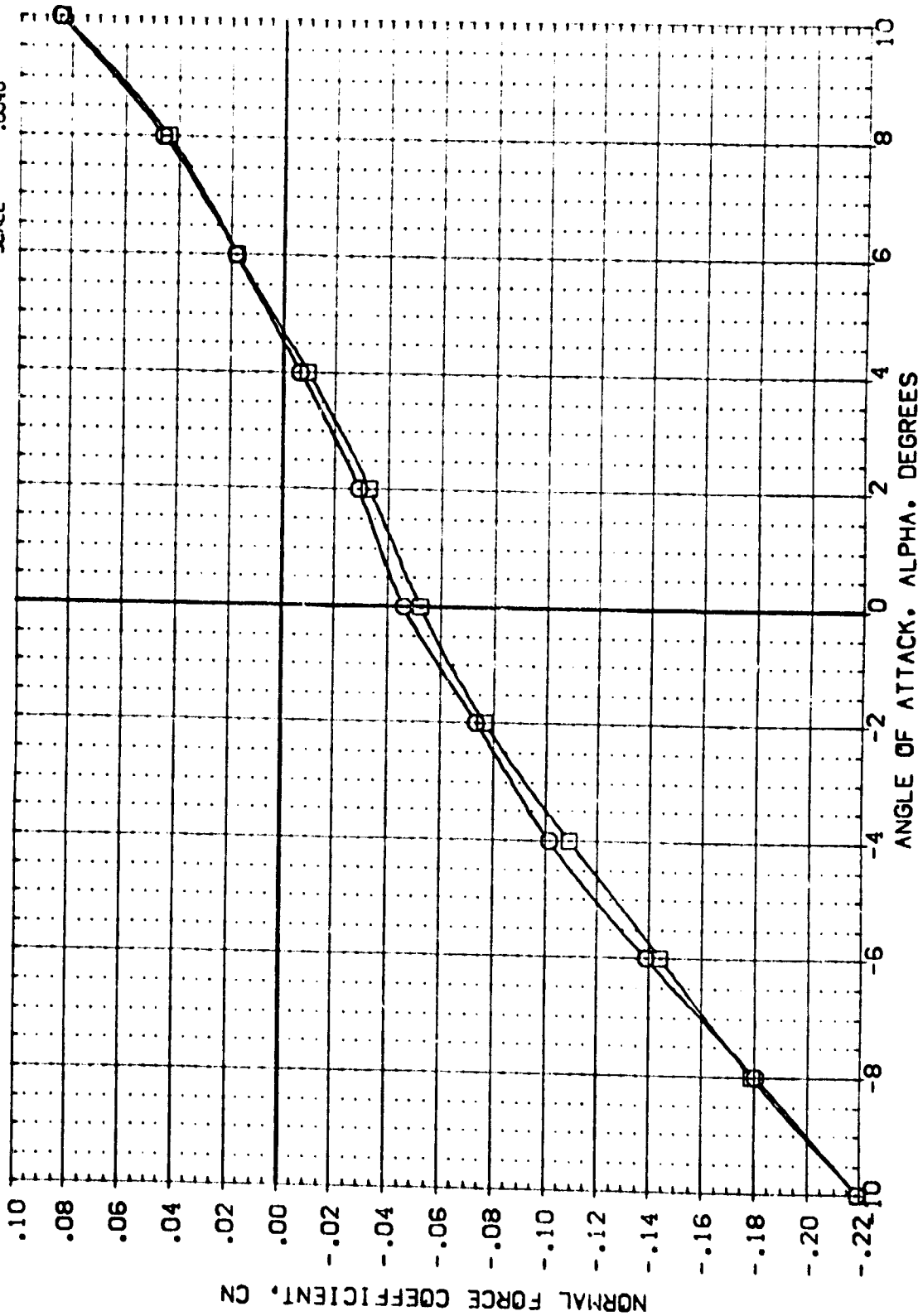
PAGE SIC



DATA SET SYMBOL: (C83T41) (C83T50) CONFIGURATION DESCRIPTION: MSFC 570((A31F)((T9)/((O3)/((S3/2)/((S3/2)YIE MSFC 570((A31F)((T9)/((O3)/((S3/2)/((S3/2)YIEG

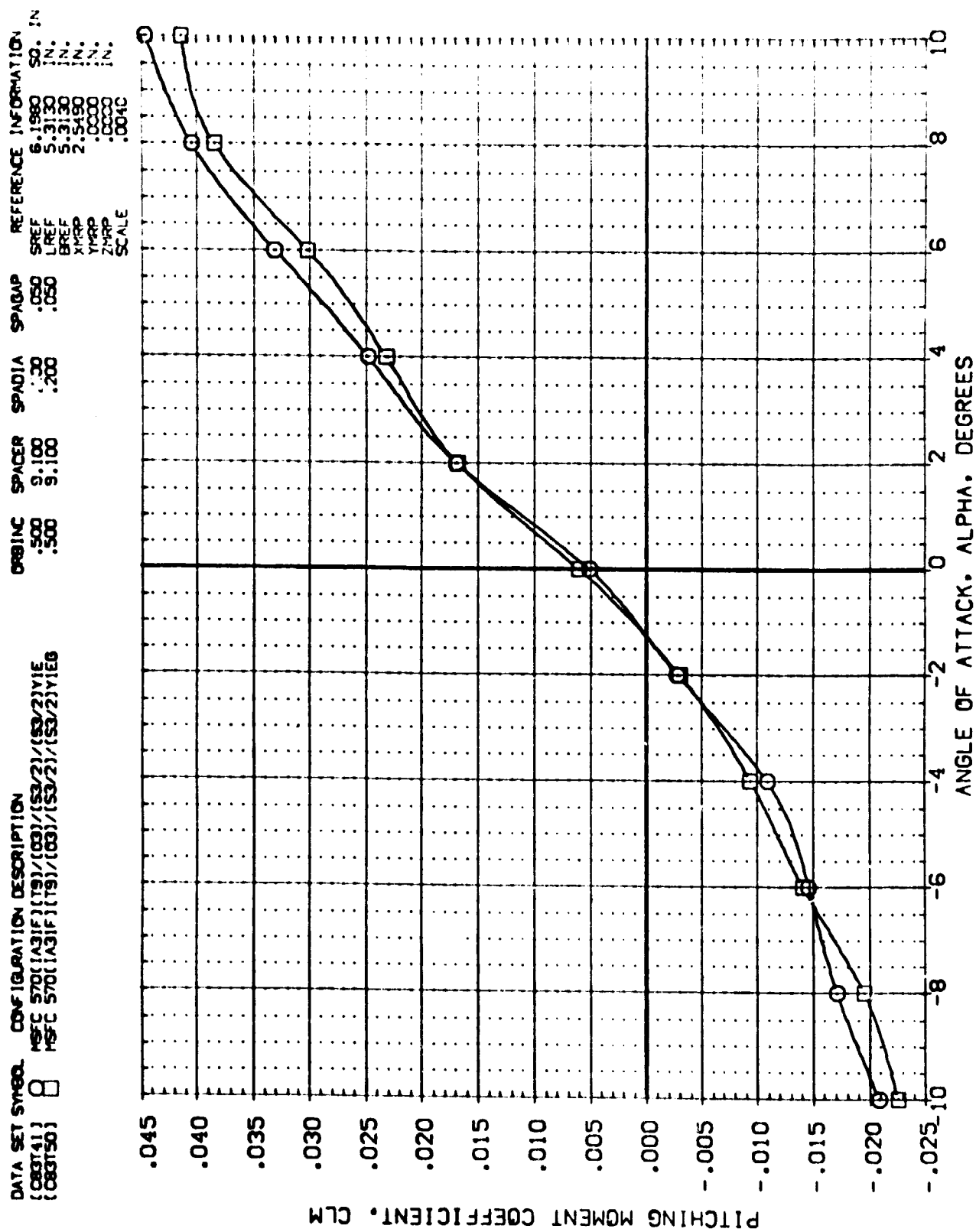
ORBIT INC: .500 .500 SPACER: 9.100 9.100 SPADIA: .200 .200 SPAGAP: .050 .050

REFERENCE INFORMATION: SREF: 6.1980 SO: IN LREF: 5.3130 IN: BREF: 5.3130 IN: YMRP: 2.5490 IN: ZMRP: .0000 IN: SCALE: .0040



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

$$[A]_{MACH} = 1.25$$

DATA SET SYMBOL: (000T41) (000T50) ☐ ☐

CONFIGURATION DESCRIPTION: MSC 570(IA3IF)(T9)/(C3)/(S3/2)/(S3/2)IE MSC 570(IA3IF)(T9)/(C3)/(S3/2)/(S3/2)IE6

SPACING: .500 .500

SPACER: 9.100 9.100

SPADIA: .200 .200

SPAGAP: .050 .050

REFERENCE INFORMATION:

SREF: 6.1990

LREF: 5.3130

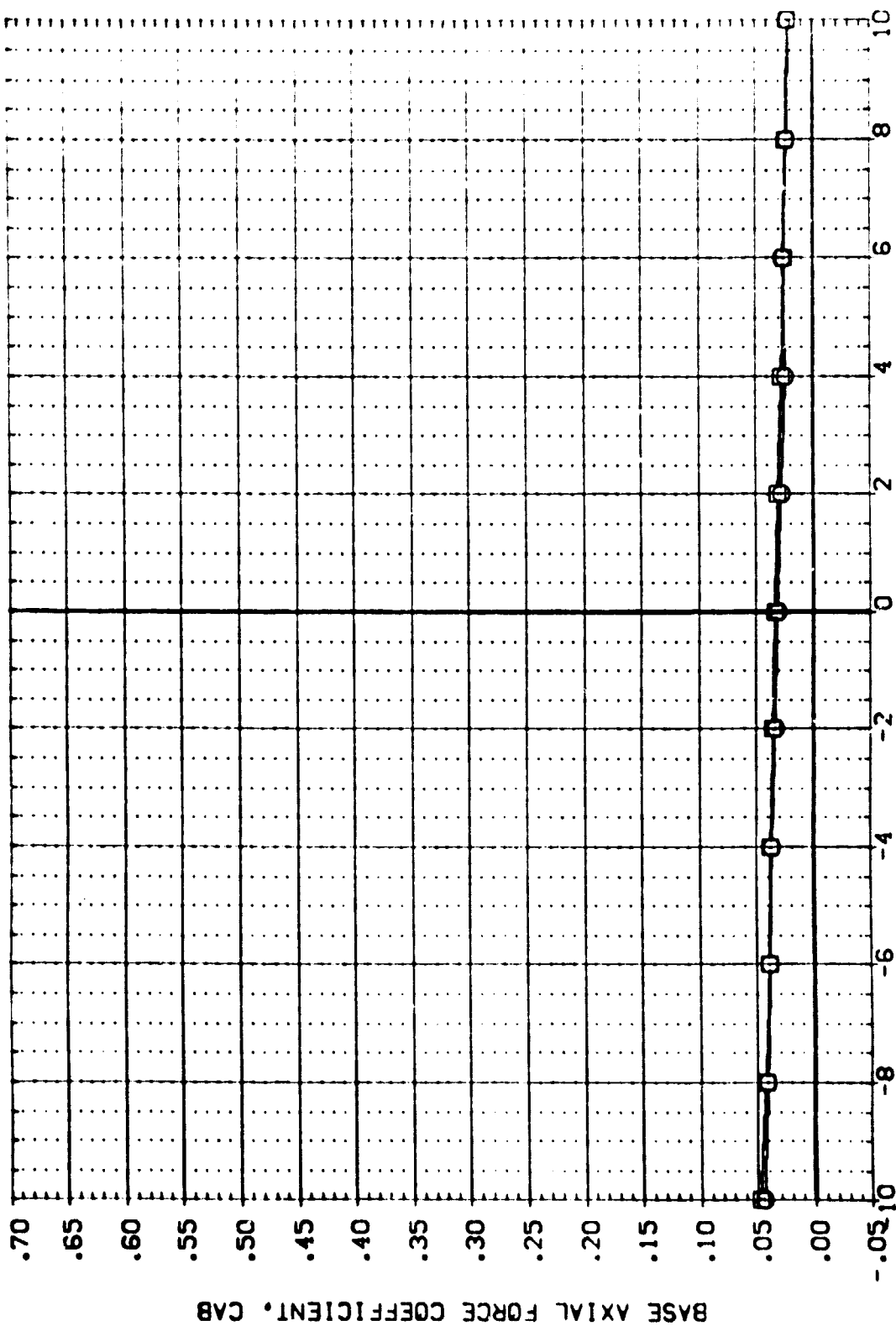
BREF: 5.3130

AMRP: 2.5490

VMRP: .0000

ZMRP: .0000

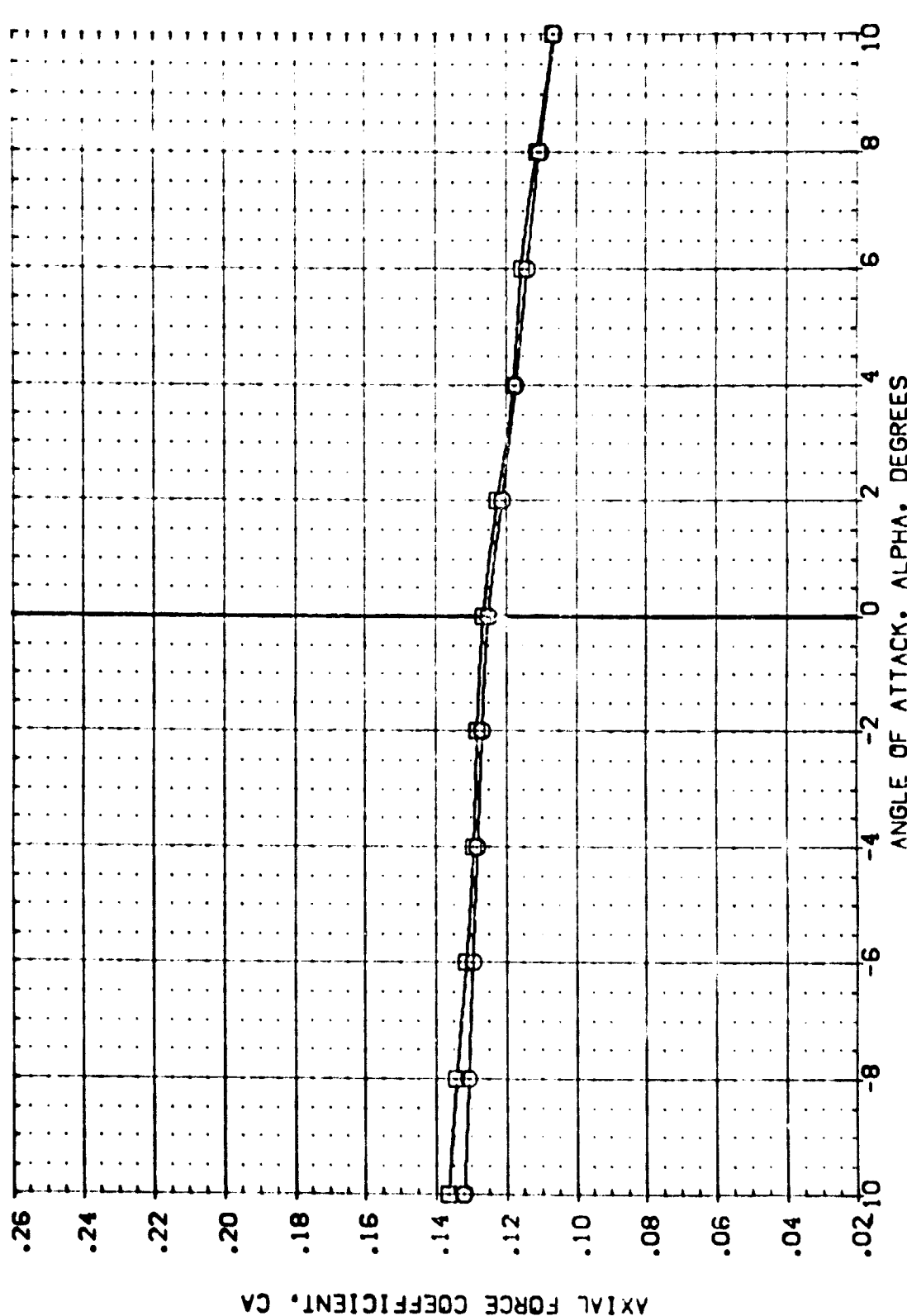
SCALE: .0010



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	SPACING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(000T41)	MSFC 570(I31F)(T9)/(C03)/(S3/2)/(S3/2)1Y1E	.500	9.100	.200	.050	SREF 6.1980
(000T50)	MSFC 570(I31F)(T9)/(C03)/(S3/2)/(S3/2)1Y1E	.500	9.100	.200	.050	LREF 5.3130
						BREF 5.3130
						XMRP 2.5450
						YMRP .0000
						ZMRP .0000
						SCALE .0010



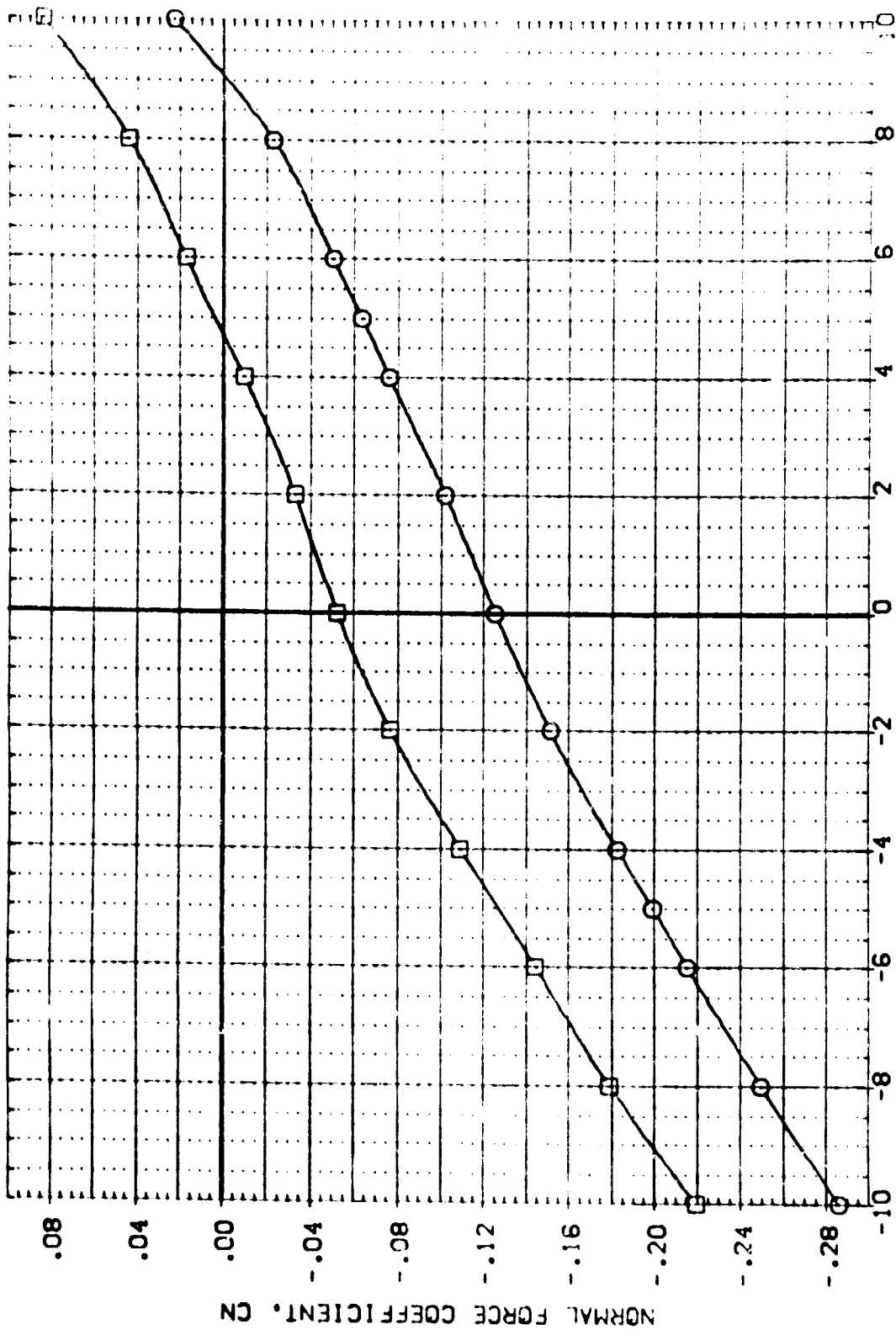
EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083121) □ MSFC 570(1A31F)(19)(U5)/(03)/(53/2)/(53/2)
 (083150) □ MSFC 570(1A31F)(19)(03)/(03)/(53/2)/(53/2)VIEG

ORBITING SPACER SPADIA SPACAP
 .500 .000 .000
 .500 9.100 .050

REFERENCE INFORMATION
 SREF 6.1983 SC 1
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5480
 YMRP .0000
 ZMRP .0000
 SCALE .0000



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

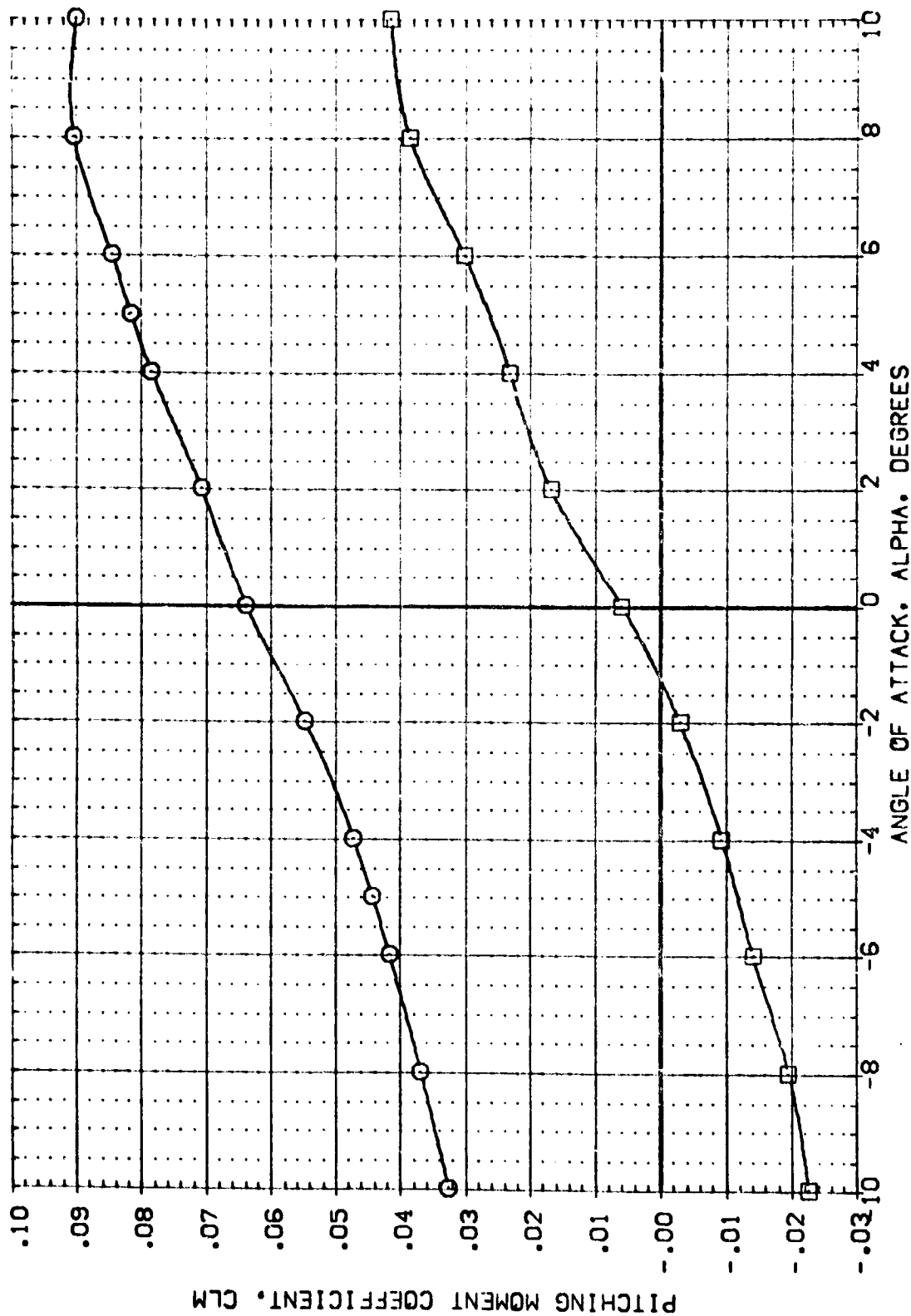
(A)MACH = 1.25

DATA SET SYMBOL: (D83T21) (D83T50)

CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2) MSFC 570(IA3IF)(T9)(U5)/(S3/2)/(S3/2)YIEG

ORBITING: SPACER SPADIA SPAGAP

REFERENCE INFORMATION: SREF 6.1580 SQ. IN. LREF 5.3130 IN. BREF 5.3130 IN. XMRP 2.5480 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE .0040



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25



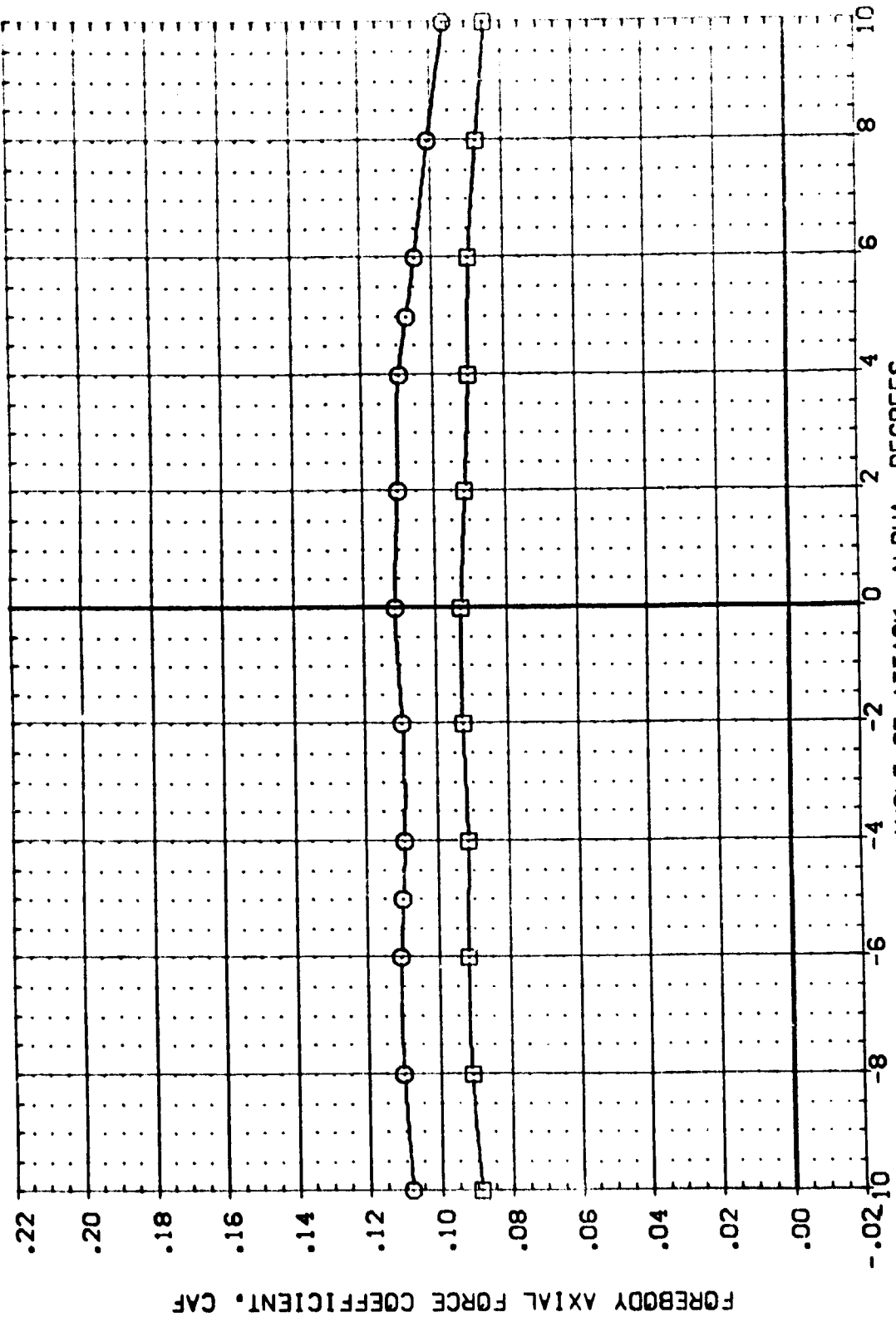
(A)MACH = 1.25

EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

ANGLE OF ATTACK, ALPHA, DEGREES

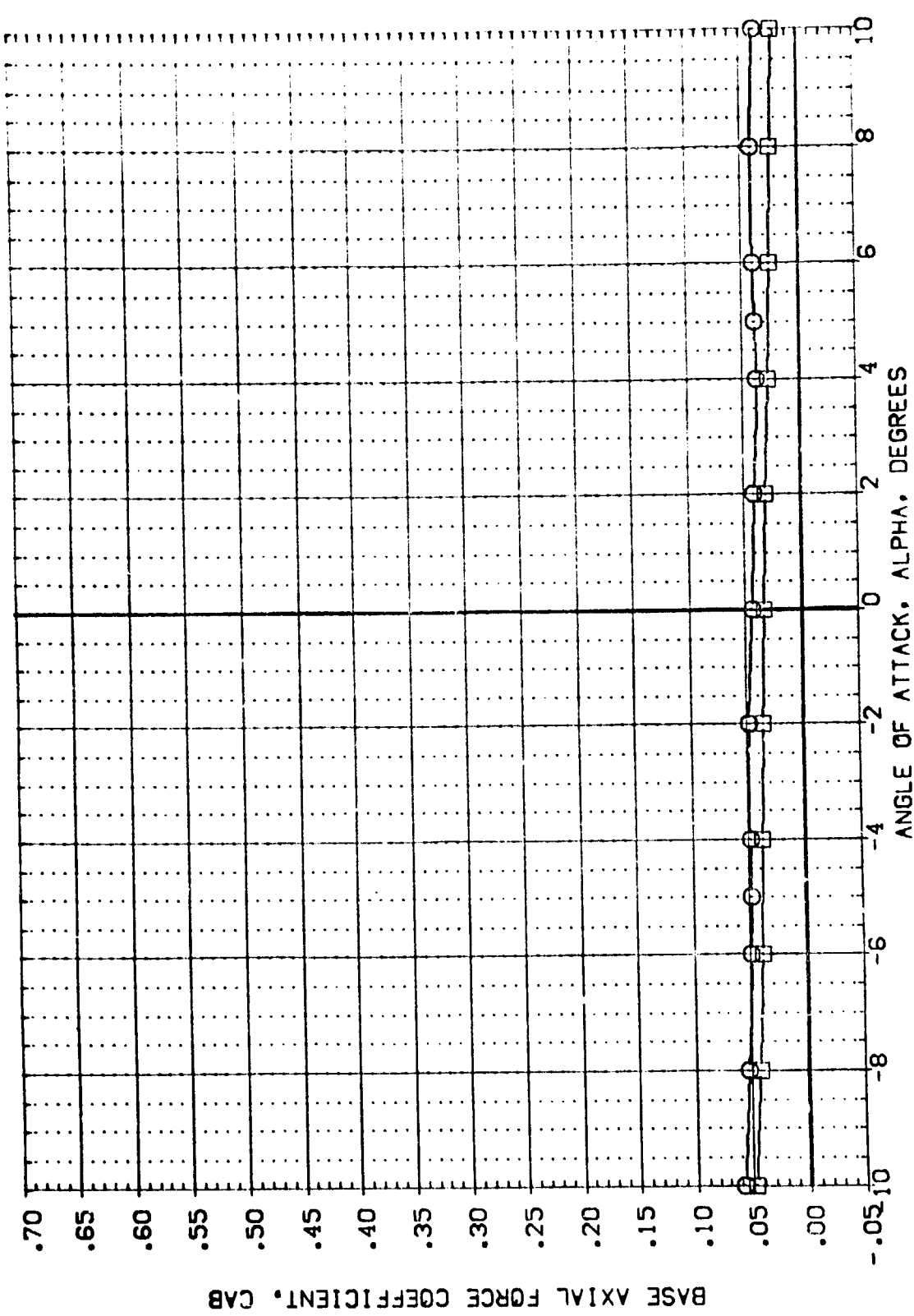
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(083121) 8 MSFC 570(1A31F)(19)(03)/(53/21)(53/2)
(083150) MSFC 570(1A31F)(19)(03)/(53/21)(53/2)Y1E3

ORBITAL SPACER SPADIA SPADAP REFERENCE INFORMATION
.500 .000 .000 SREF 6.1980 SQ. IN.
.500 .000 .000 LREF 5.3130 IN.
XMRP 2.5450 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0040



FOREBODY AXIAL FORCE COEFFICIENT, CAF

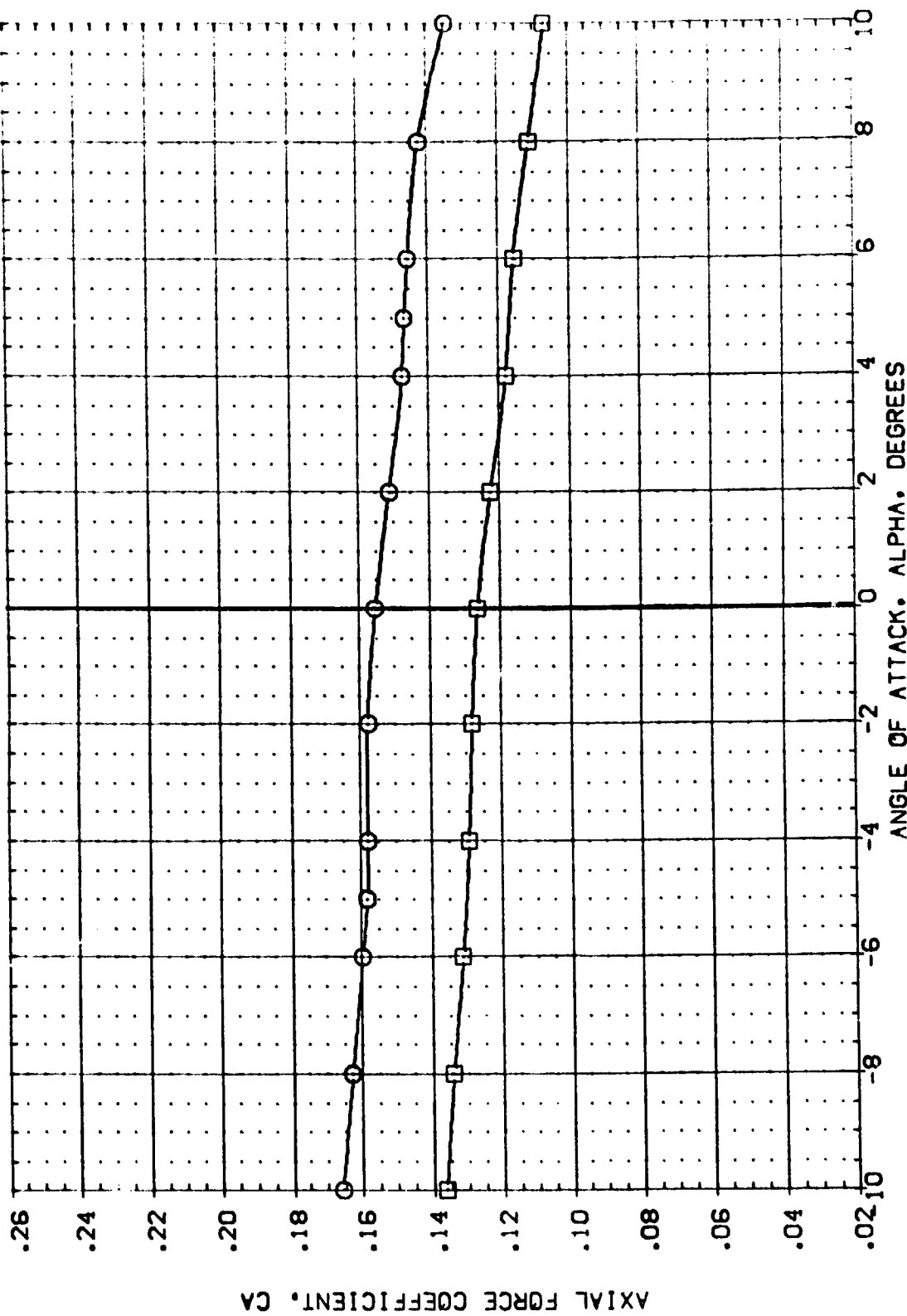
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
{D83T21}	MSFC 570(1A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)	.500	.000	.000	.000	SREF 6.1980 IN.
{D83T50}	MSFC 570(1A31F)(T9)(U5)/(03)/(S3/2)/(S3/2)Y1E6	.500	9.100	.200	.050	LREF 5.3130 IN.
						BREF 5.3130 IN.
						YMRP 2.5490 IN.
						ZMRP .0000 IN.
						SCALE .0010



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET


(A)MACH = 1.25

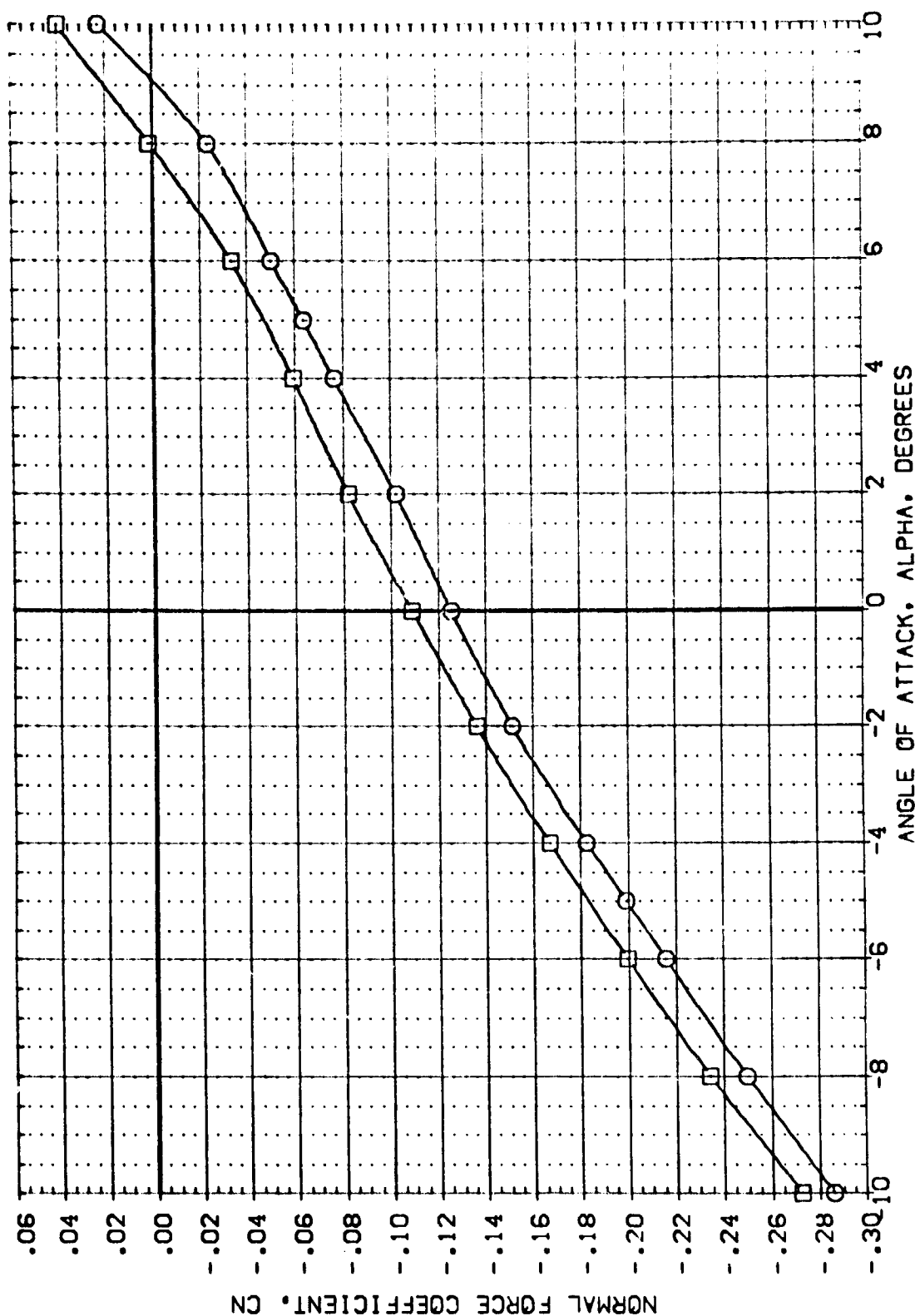
DATA SET SYMBOL: (083121) (083150) ☐ MSFC 570(1A31F)(T9)(US)/(03)/(S3/2)/(S3/2)Y1E8
 CONFIGURATION DESCRIPTION: MSFC 570(1A31F)(T9)(US)/(03)/(S3/2)/(S3/2)Y1E8
 ORBING: .500 .500
 SPACER: .000 9.100
 SPADIA: .000 .200
 SPAGAP: .000 .050
 REFERENCE INFORMATION:
 SREF: 6.1980 SQ. IN.
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0010



EFFECT ON ET OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (083T21) (083T56)  CONFIGURATION DESCRIPTION: MSFC 570(IA3)F(I9)(U5)/(S3/2) MSFC 570(IA3)F(I9)(U5)/(S3/2) ORBITING: .500 .500 SPACER: .000 9.000 SPADIA: .000 .200 SPADAP: .000 .050 REFERENCE INFORMATION: SREF 6.1980 SQ. IN. LREF 5.3130 IN. BREF 5.3130 IN. XMRP 2.5190 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE .0010



EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (D83T21) (D83T55) ☐ ☐

CONFIGURATION DESCRIPTION: HSC 570(IA3IF)(T9)(U5)/(G3)/(S3/2) HSC 570(IA3IF)(T9)(U5)/(G3)/(S3/2)YZ

ORBITING: .500 .500

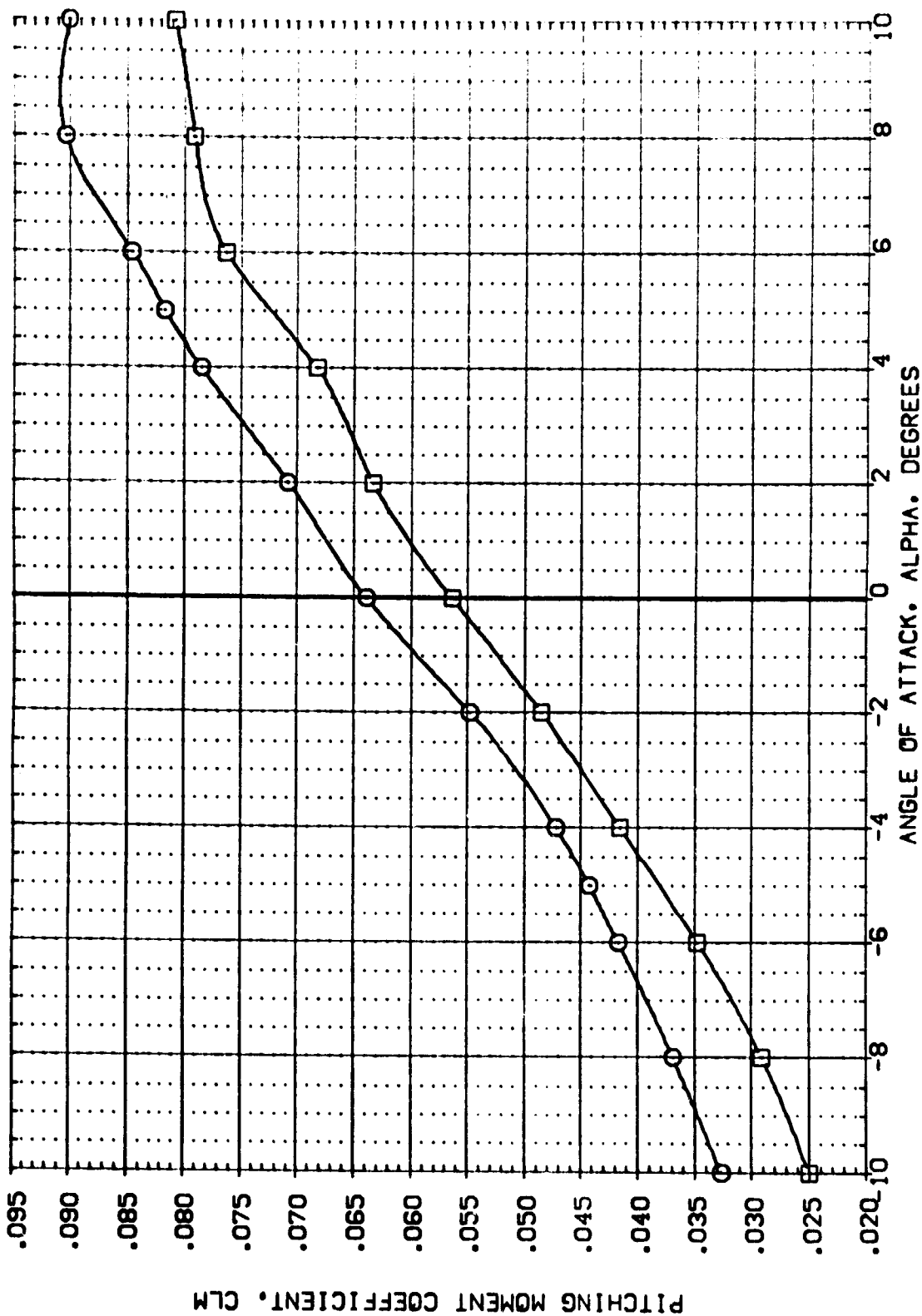
SPACER: .000 .000

SPADIA: .000 .200

SPAGAP: .000 .050

REFERENCE INFORMATION:

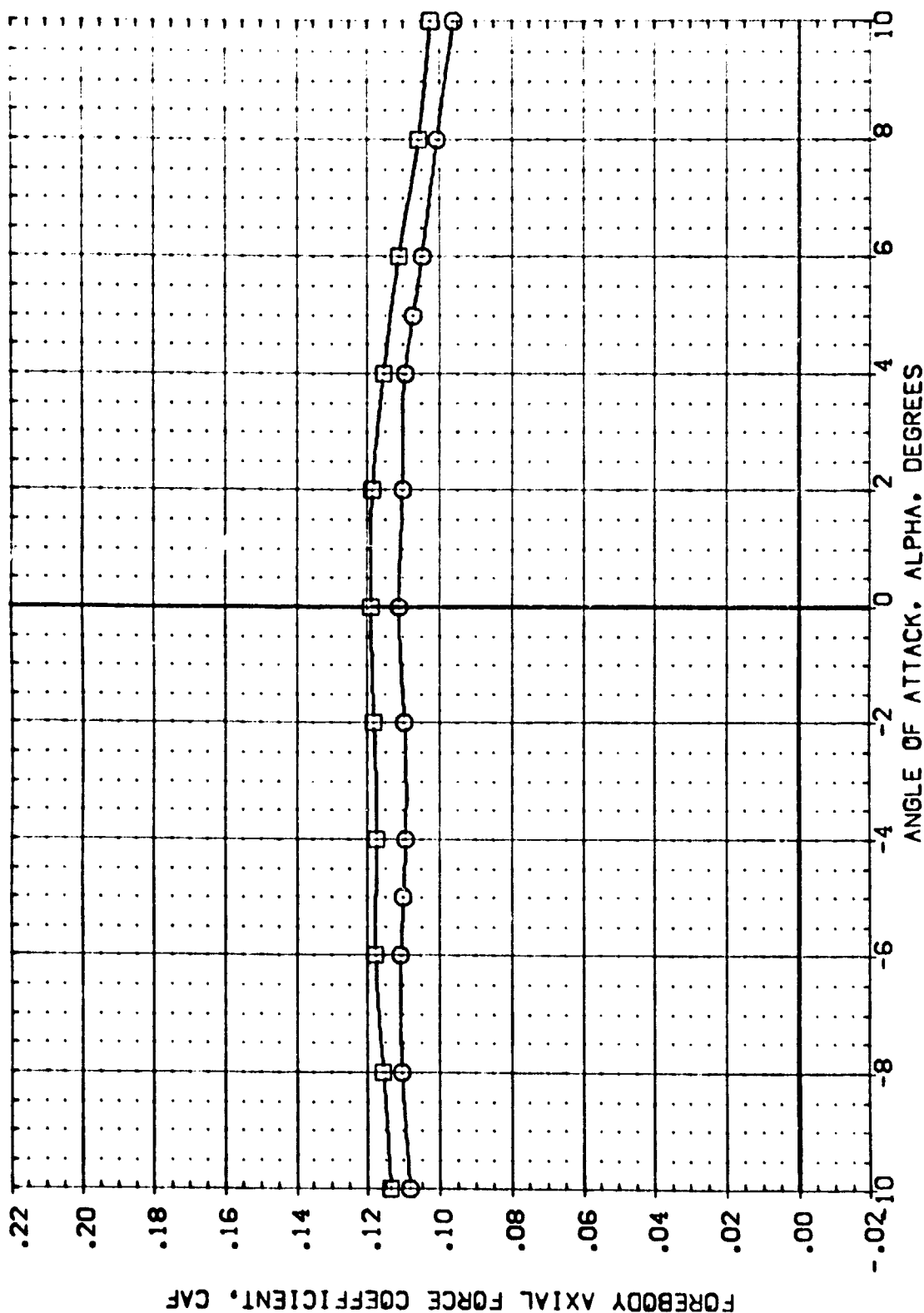
SREF	6.1980	50.	IN.
LREF	5.3130	IN.	
BREF	5.3130	IN.	
YMRP	2.5490	IN.	
ZMRP	.0000	IN.	
SCALE	.0010		



EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: 083T56) CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(T9)(U5)(C3)/(S3/2)/(S3/2)YZE ORBITING: .500 SPACER: .000 SPADIA: .000 SPAGAP: .000 REFERENCE INFORMATION: SREF: 6.1980 SQ: IN: LREF: 5.3130 IN: BREF: 5.3130 IN: XMRP: 2.5450 IN: YMRP: .000 IN: ZMRP: .000 IN: SCALE: .0040



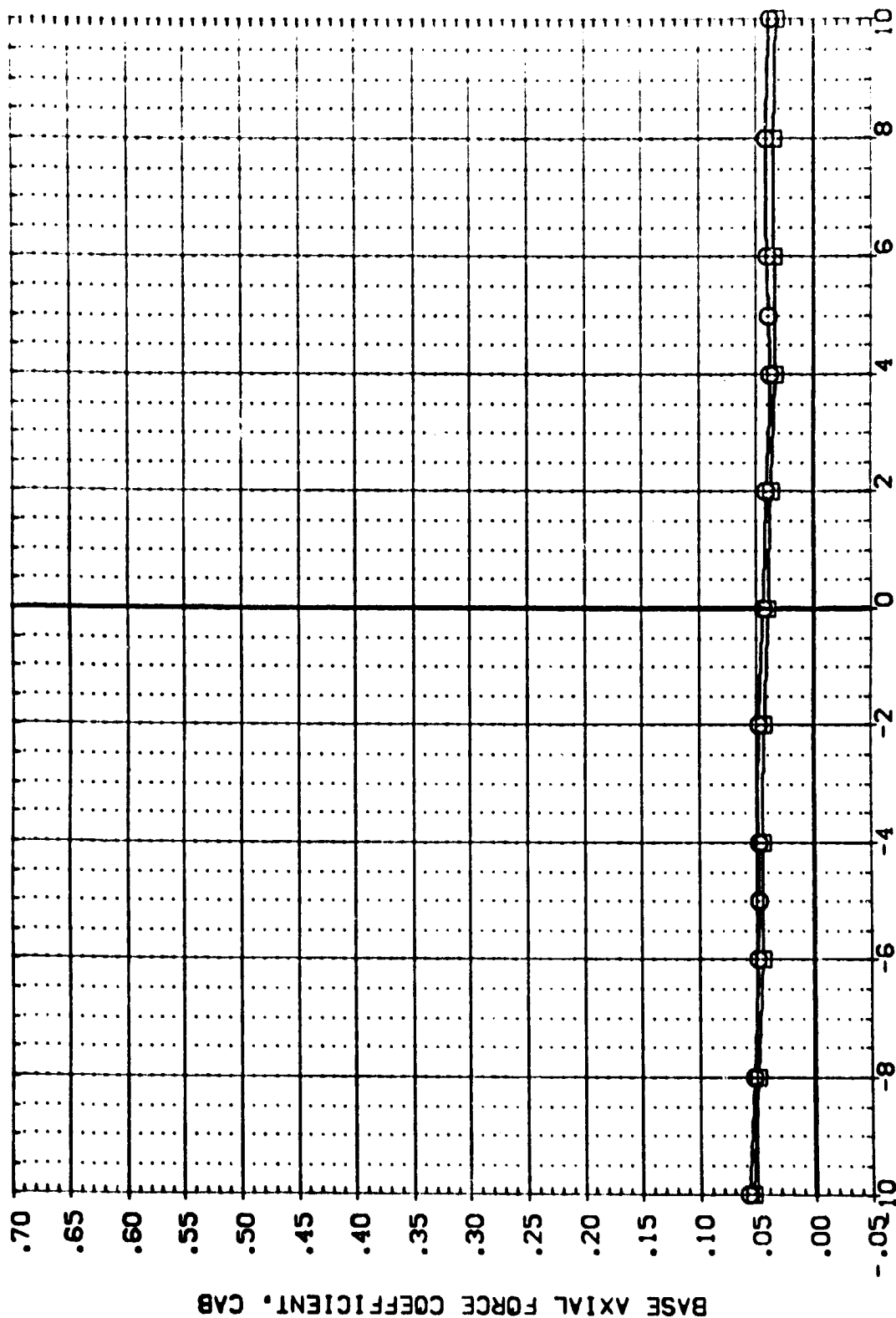
EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (080121) (080156)
 CONFIGURATION DESCRIPTION: MSFC 5701(A31F)(19)(L5)/(03)/(53/2)/(53/2)Y2E
 MSFC 5701(A31F)(19)(L5)/(03)/(53/2)/(53/2)Y2E

ORIGIN: .500
 SPACER: .000
 SPADIA: .000
 SPAGAP: .000
 .050

REFERENCE INFORMATION:
 SREF: 6.1990 SQ. IN
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (D80721) (D80756)

CONFIGURATION DESCRIPTION:
 MSC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2)
 MSC 570 (A31F) (T9) (U5) / (S3/2) / (S3/2) VE

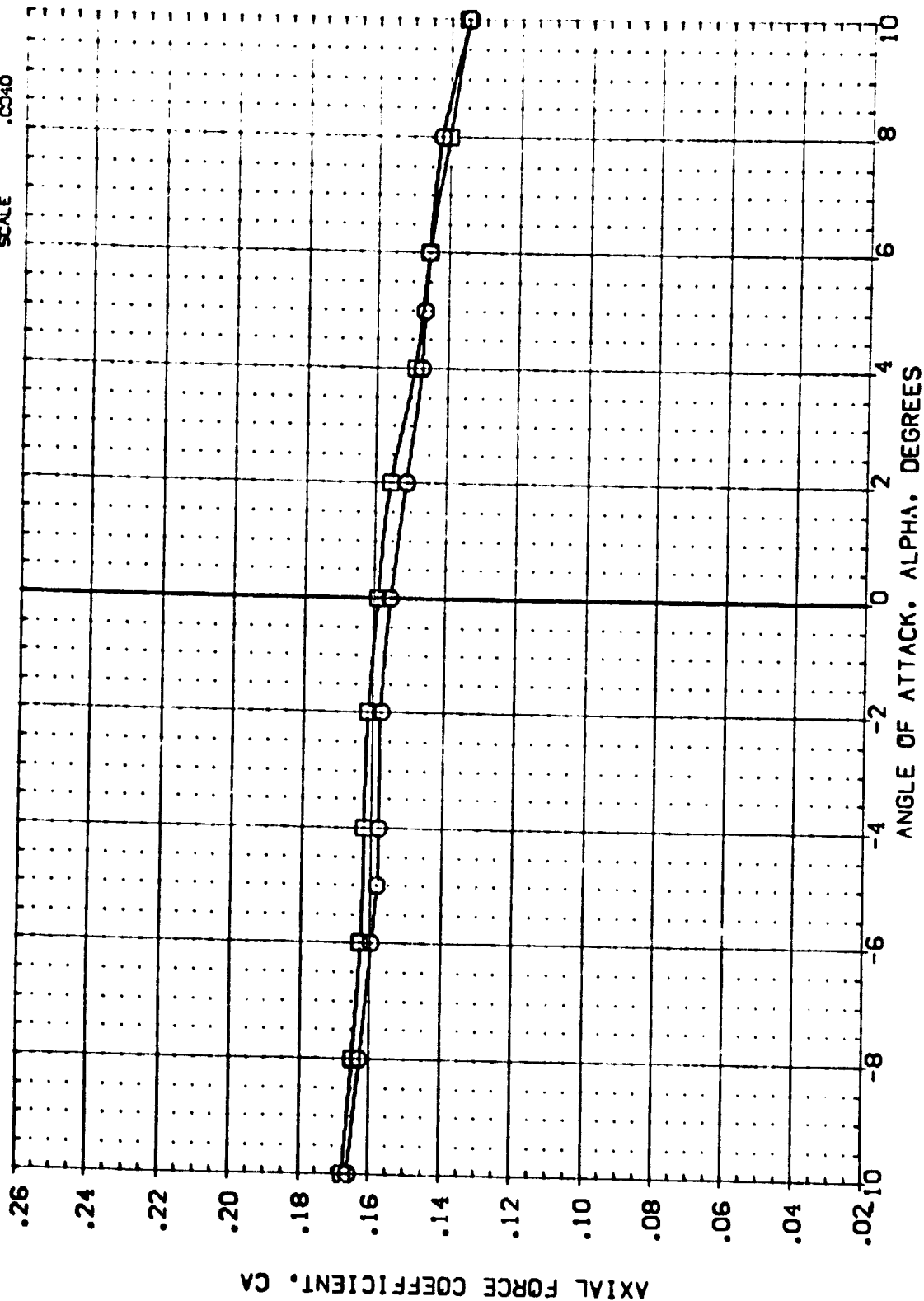
ORBITING: .500 .500

SPACER: .000 .000 .000

SPADIA: .000 .200

SPADAP: .000 .050

REFERENCE INFORMATION:
 SREF: 5.1980 S2: IN
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5450 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0340

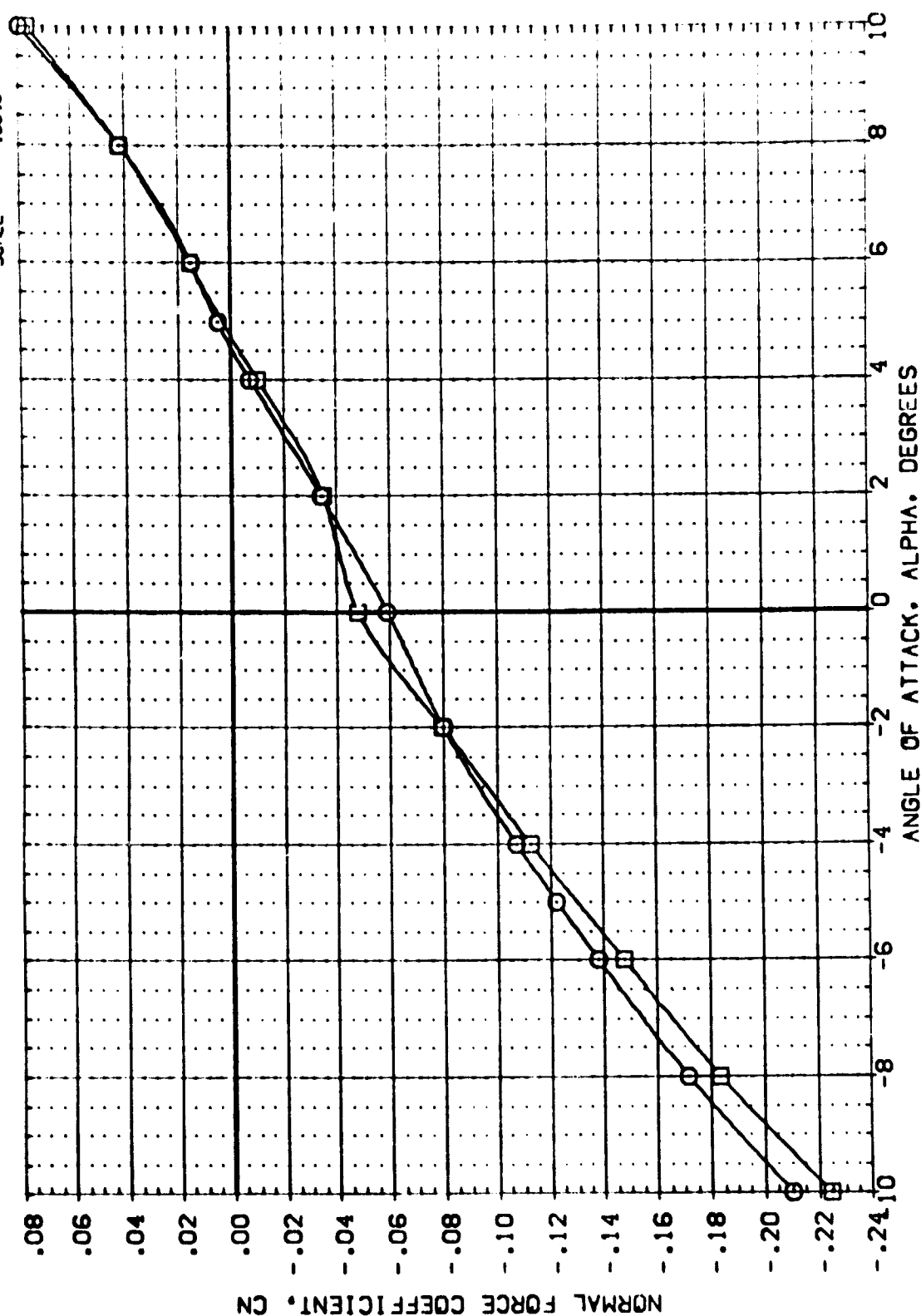


EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO ET

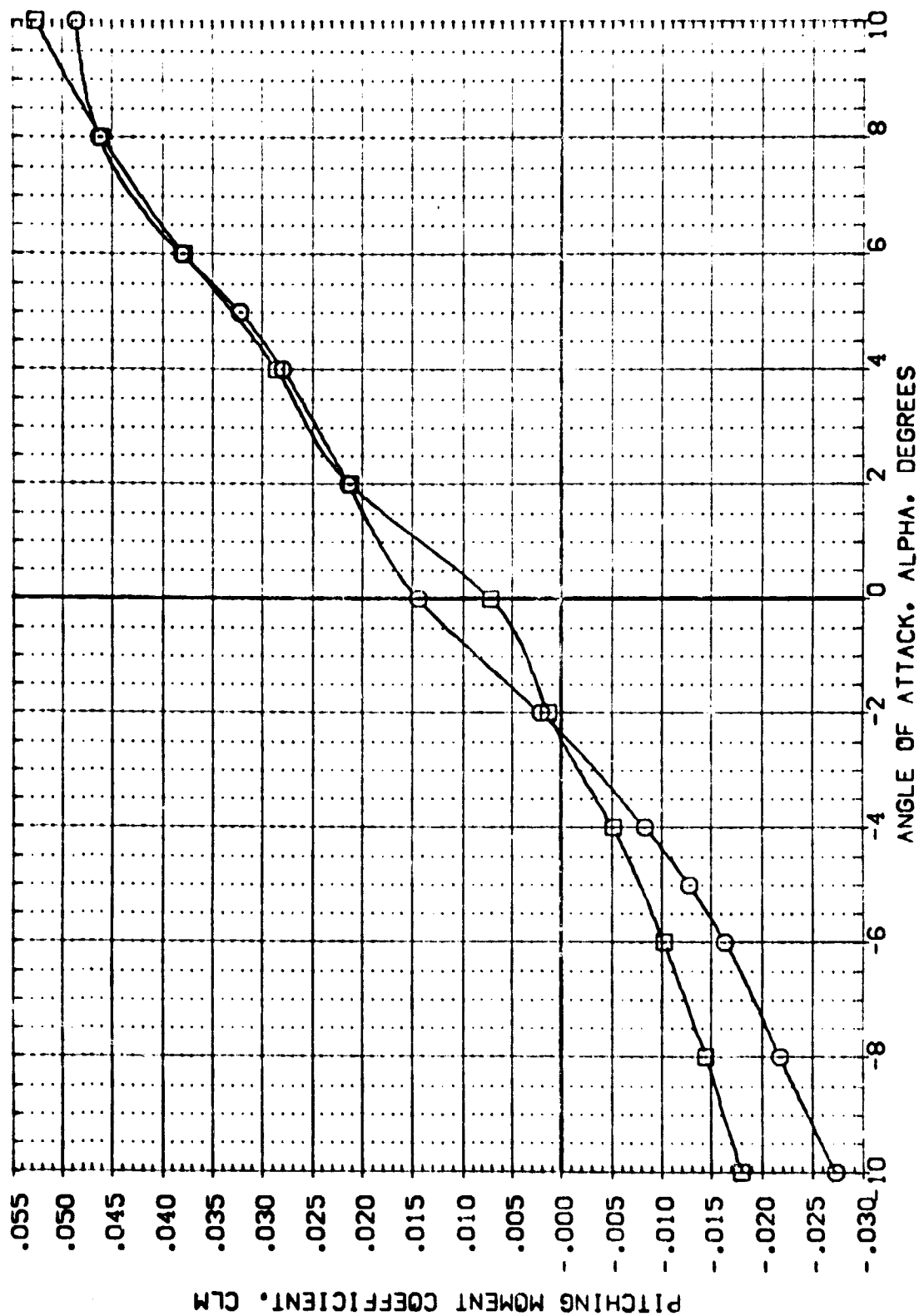
(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(080T02)	MSFC 570(1A31F)(19)/(03)/(53/2)/(53/2)
(080T51)	MSFC 570(1A31F)(19)/(03)/(53/2)/(53/2)VE

SPRING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	Z
.500	.000	.000	.000	SREF	6.1980
.500	.000	.000	.000	LREF	5.3130
.500	.100	.200	.050	BREF	5.3130
				Z	.Z
				XTRP	2.5450
				YTRP	.0000
				ZTRP	.0000
				SCALE	.0040



DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ORBITAL		SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(083T02)	□	MSC 570([A3IF])(T9)/([G3]/([G3/2]/([G3/2]))	.500	.000	.000	.000	.050	SREF	6.1980
(083T51)	□	MSC 570([A3IF])(T9)/([G3]/([G3/2]/([G3/2]))	.500	.100	.200	.000	.050	LREF	5.3130
								BREF	5.3130
								XMRP	2.5450
								YMRP	.0000
								ZMRP	.0000
								SCALE	.0010



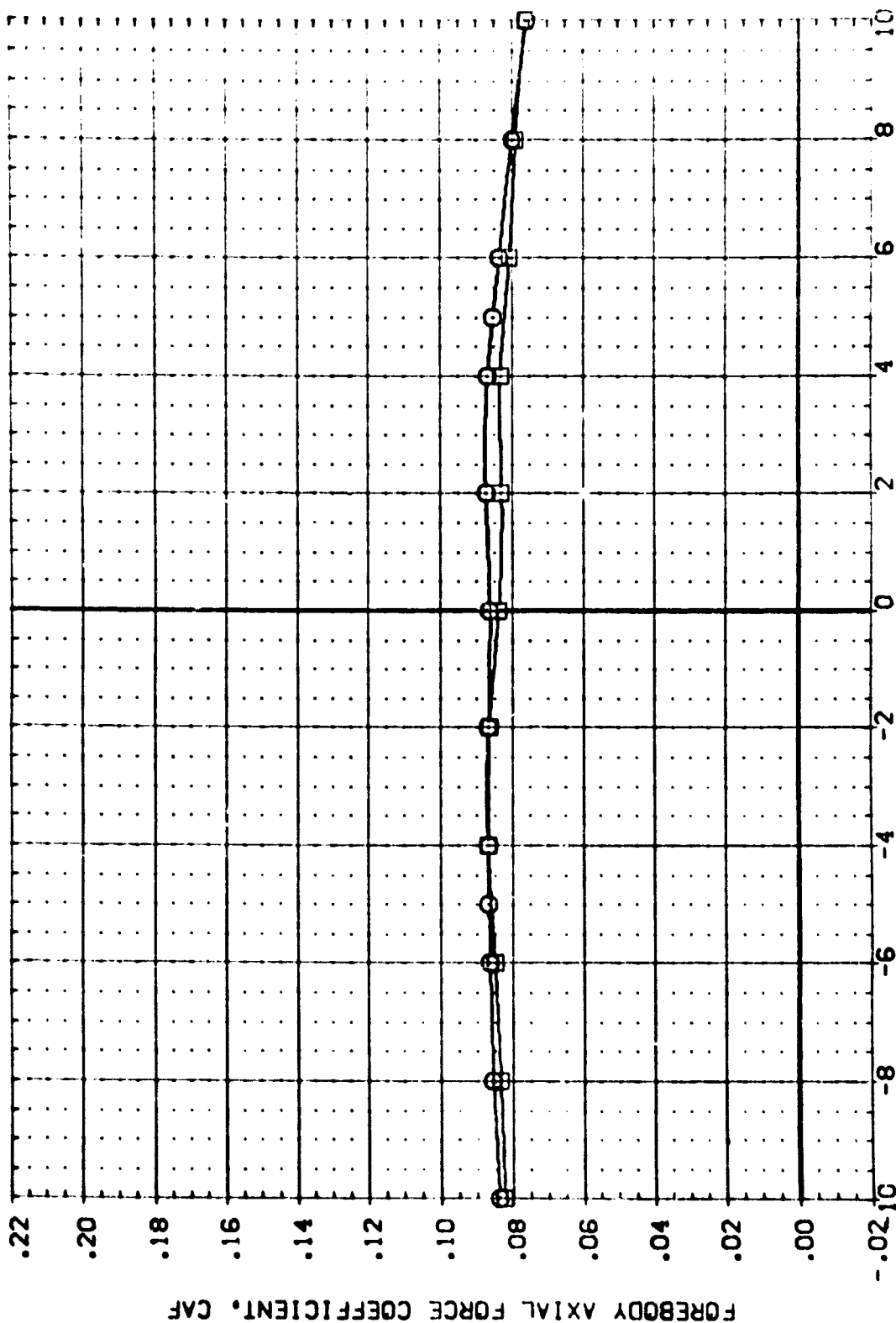
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (DIGIT 2) ☐ H5FC 570(I A3IF)(I 9)/(O 3)/(S 3/2)/(S 3/2)
 (DIGIT 1) ☐ H5FC 570(I A3IF)(I 9)/(O 3)/(S 3/2)/(S 3/2)VE

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .100 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XREF 2.5450 IN.
 YREF .0000 IN.
 ZREF .0000 IN.
 SCALE .0040



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO ET

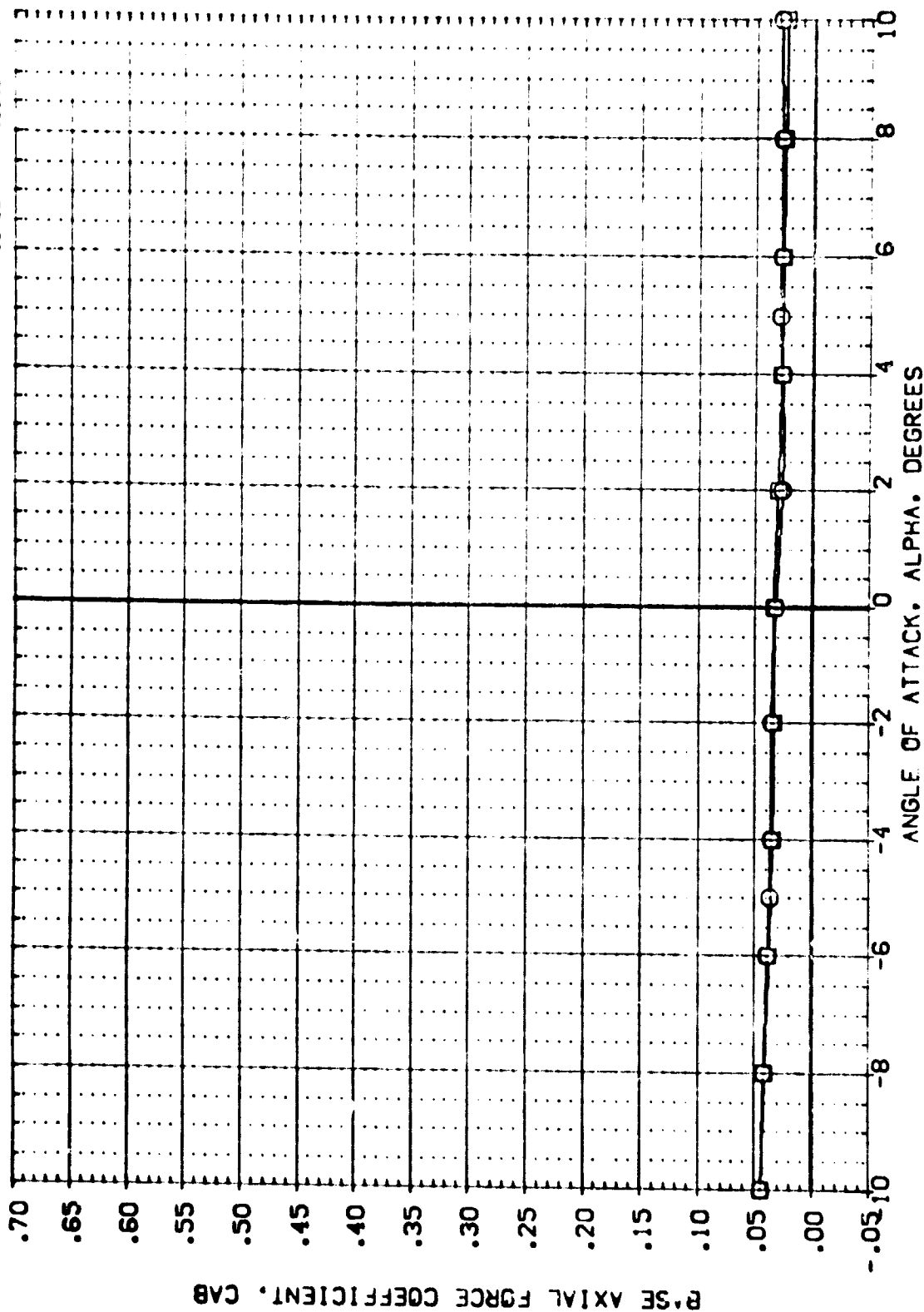
(A)MACH = 1.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C03T02) ☐ M5FC 570(I A3IF)(T9)/(C3)/(S3/2)/(S3/2) V2E
 (C03T51) ☐ M5FC 570(I A3IF)(T9)/(C3)/(S3/2)/(S3/2) V2E

SPACING SPACER SPADIA SPAGAP
 .500 .000 .000 .000
 .500 .100 .200 .050

REFERENCE INFORMATION
 SREF 6.1980 IN.
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5450 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



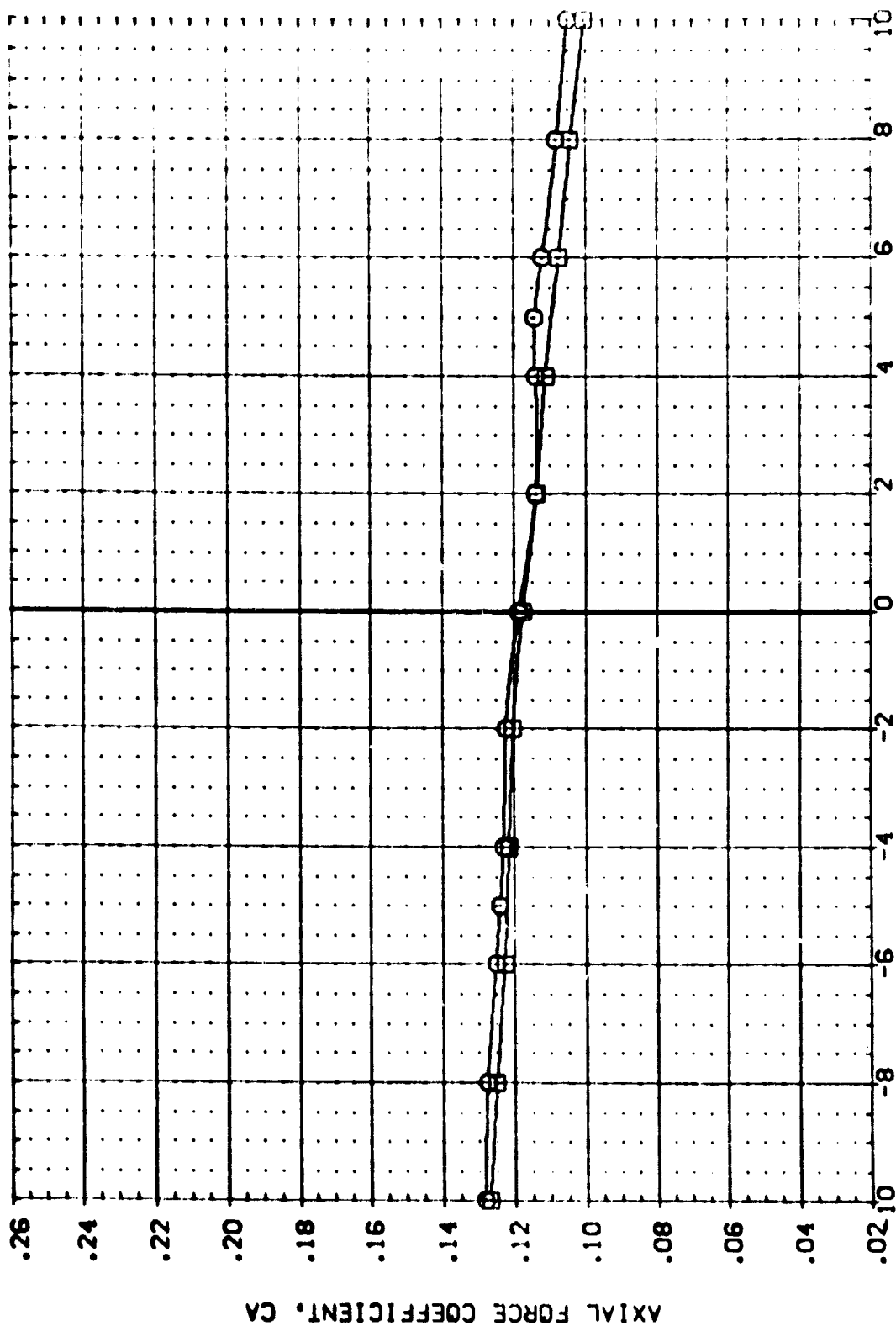
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: 0837021
 CONFIGURATION DESCRIPTION: MFC 570(A31F)(19)/(53/21)/(53/21) MFC 570(A31F)(19)/(53/21)/(53/21)VE

ORIGIN: .500
 SPACER: .000
 SPACIA: .000
 SPADAP: .000

REFERENCE INFORMATION:
 SREF: 6.1900
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

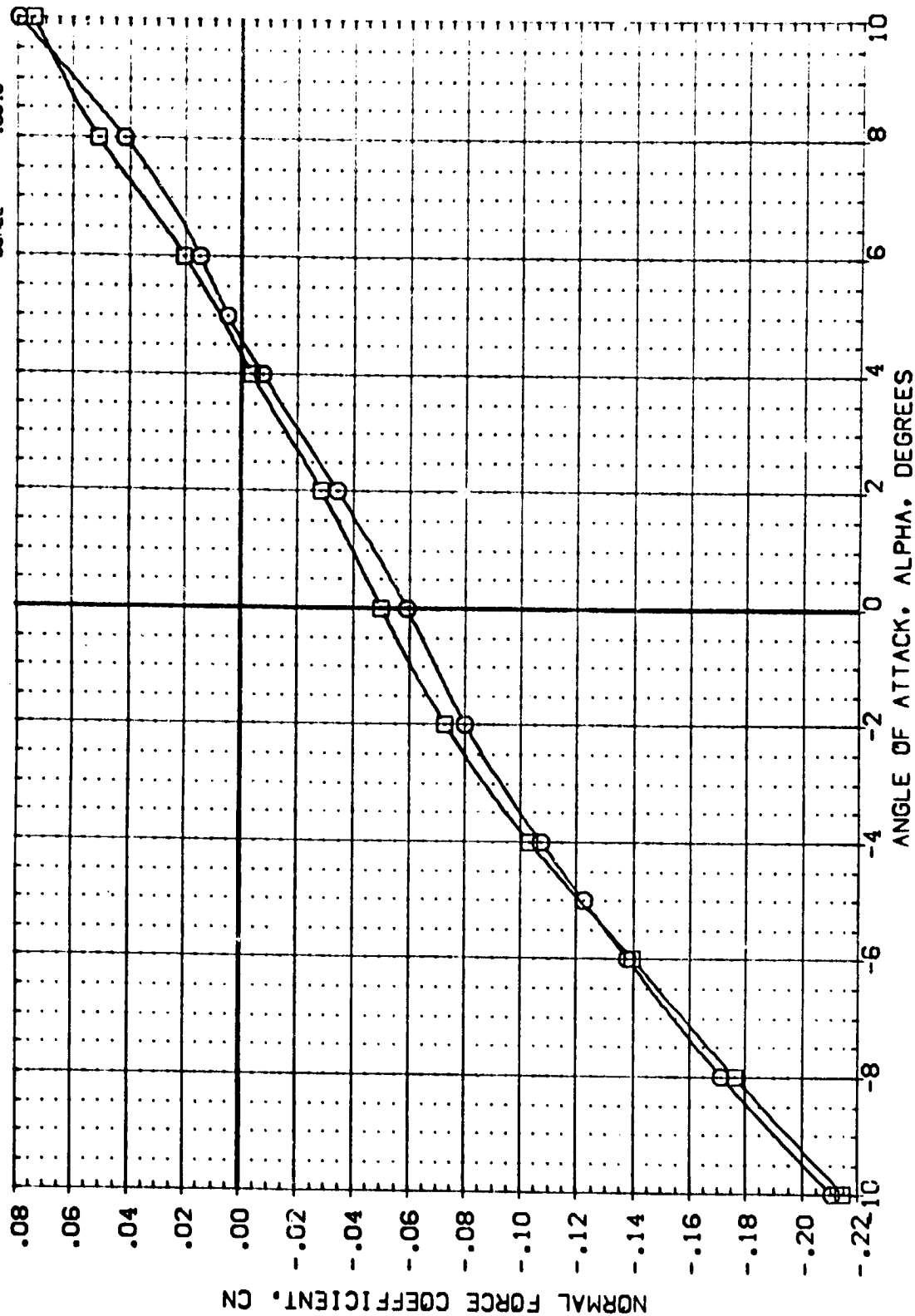
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (D8GT02) □ MSC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)
 (D8GT52) □ MSC 570(IA3IF)(T9)/(O3)/(S3/2)/(S3/2)110

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.220 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN.
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 YMRP 2.5450 IN.
 ZMRP .0000 IN.
 SCALE .0040 IN.



EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED ON 03

(A)MACH = 1.25

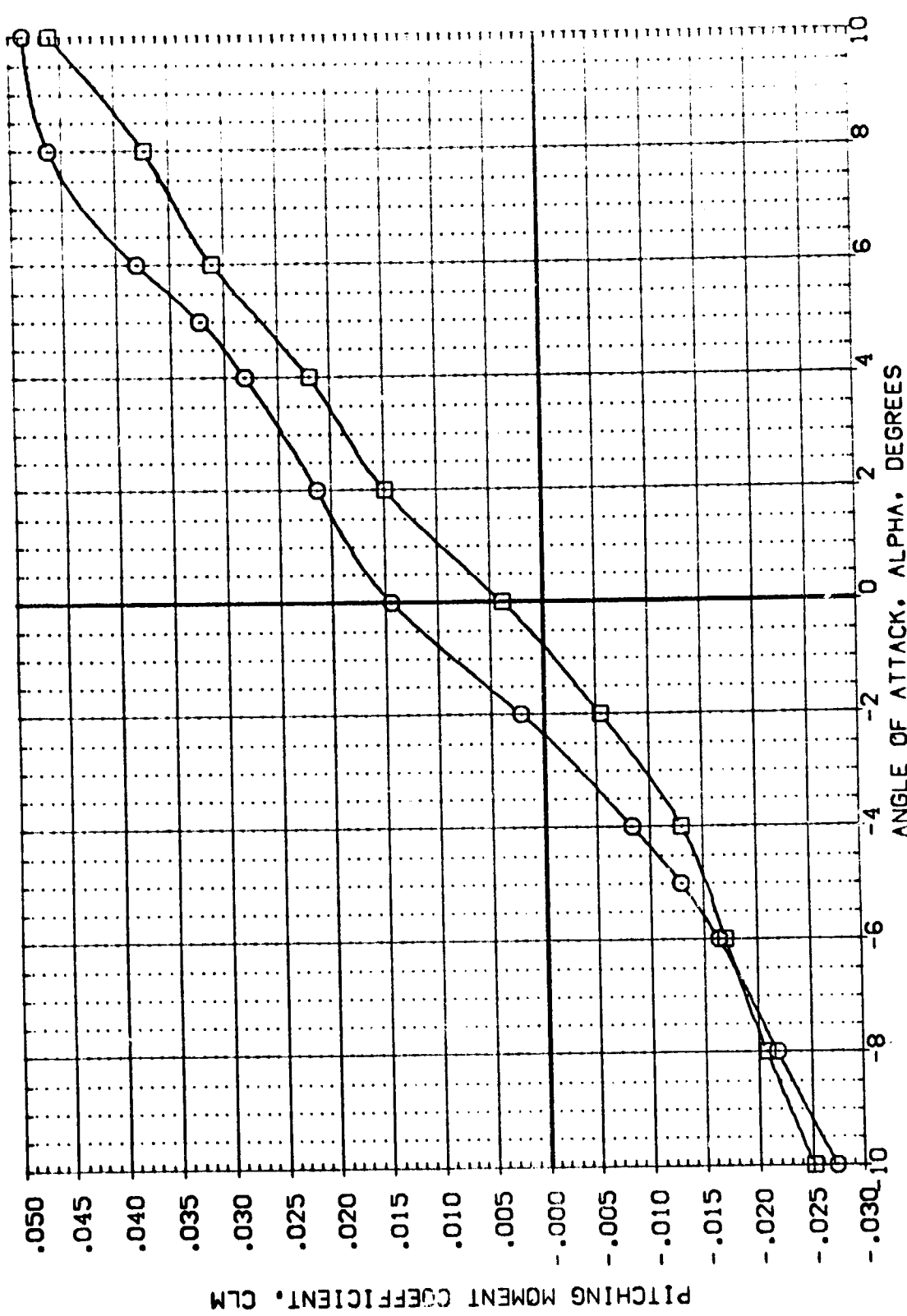


DATA SET SYMBOL: (083T02) (083T52)

CONFIGURATION DESCRIPTION: H5FC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2) H5FC 570(IA3IF)(T9)/(03)/(S3/2)/(S3/2)10

ORIGIN: .500
SPACER: .000
SPADIA: .000
SPAGAP: .000
SCALE: .0040

REFERENCE INFORMATION:
SREF: 6.1960
LREF: 5.3130
BREF: 5.3130
XMRP: 2.5490
YMRP: .0000
ZMRP: .0000
SCALE: .0040



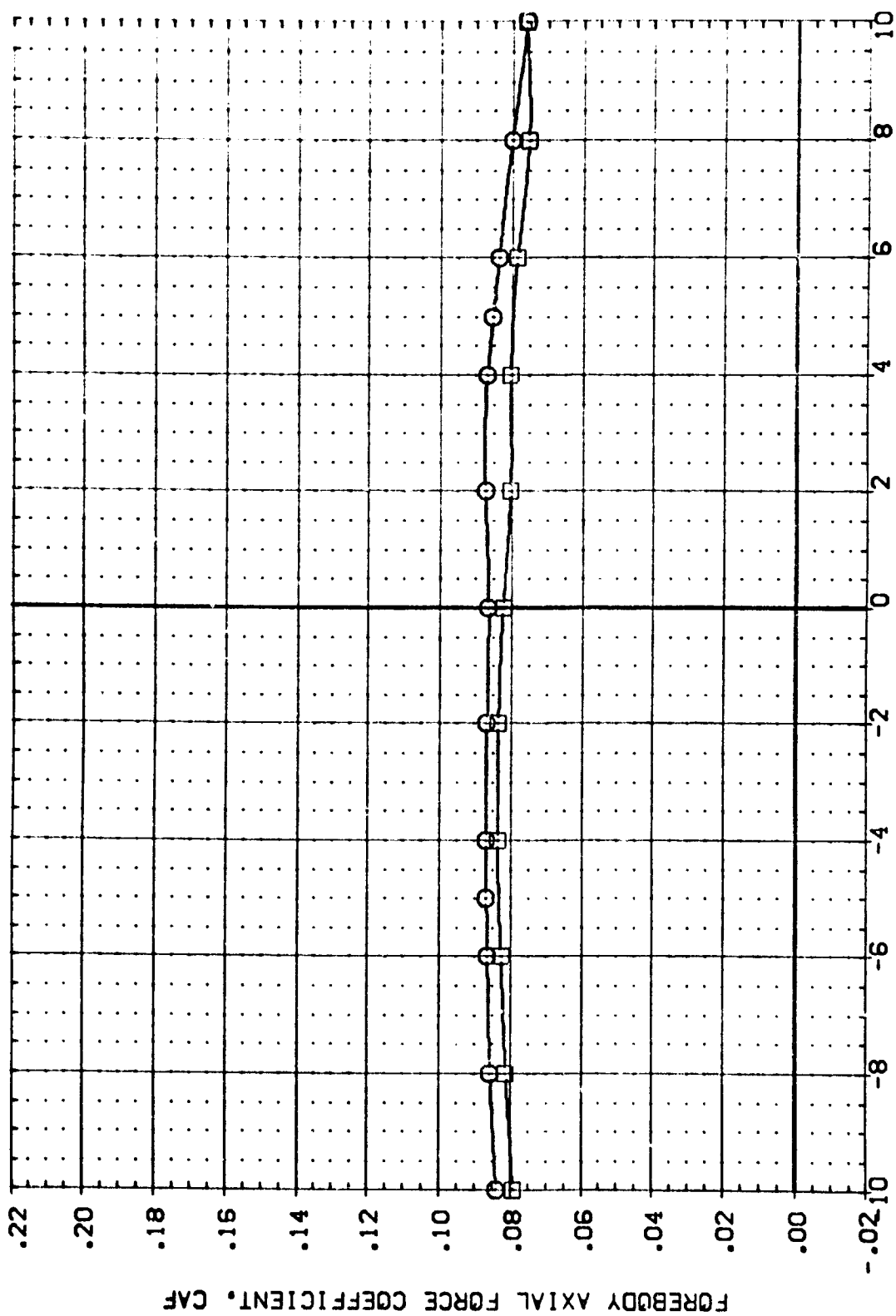
EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED ON 03

(A) MACH = 1.25

DATA SET SYMBOL: \square CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(I9)/(O3)/(S3/2)/(S3/2) MSFC 570(IA3IF)(I9)/(O3)/(S3/2)/(S3/2)I10

ORBITING: .500 SPACER: .000 SPADIA: .000 SPAGAP: .000

REFERENCE INFORMATION: SREF: 6.1980 SQ: IN: LREF: 5.3130 IN: BREF: 5.3130 IN: XMRP: 2.5490 IN: YMRP: .0000 IN: ZMRP: .0000 IN: SCALE: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

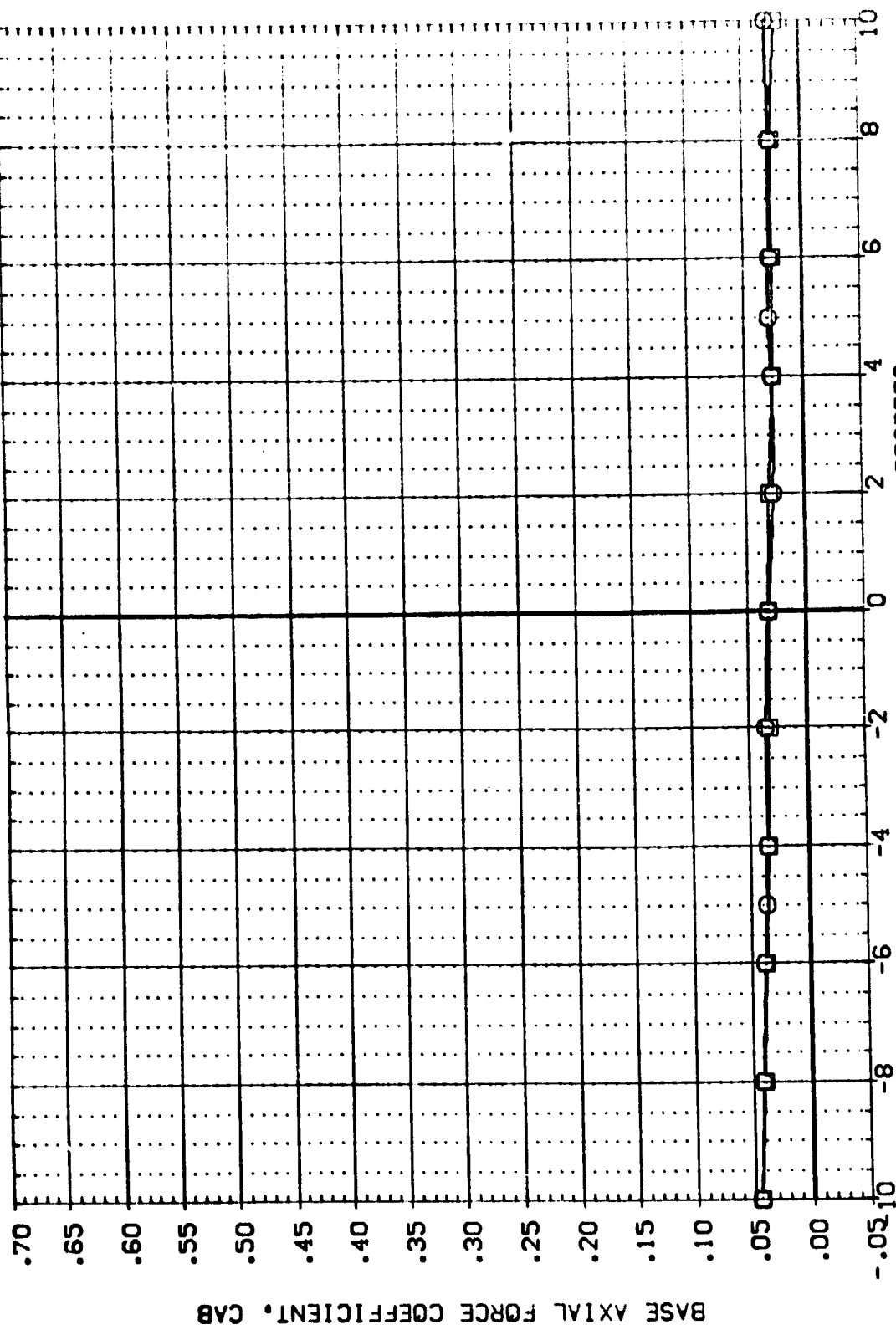
EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED ON 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (D83T02) MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)
 (D83T52) MSFC 570(1A31F)(T9)/(03)/(S3/2)/(S3/2)10

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.220 .050

REFERENCE INFORMATION
 SREF 6.1980 SO. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



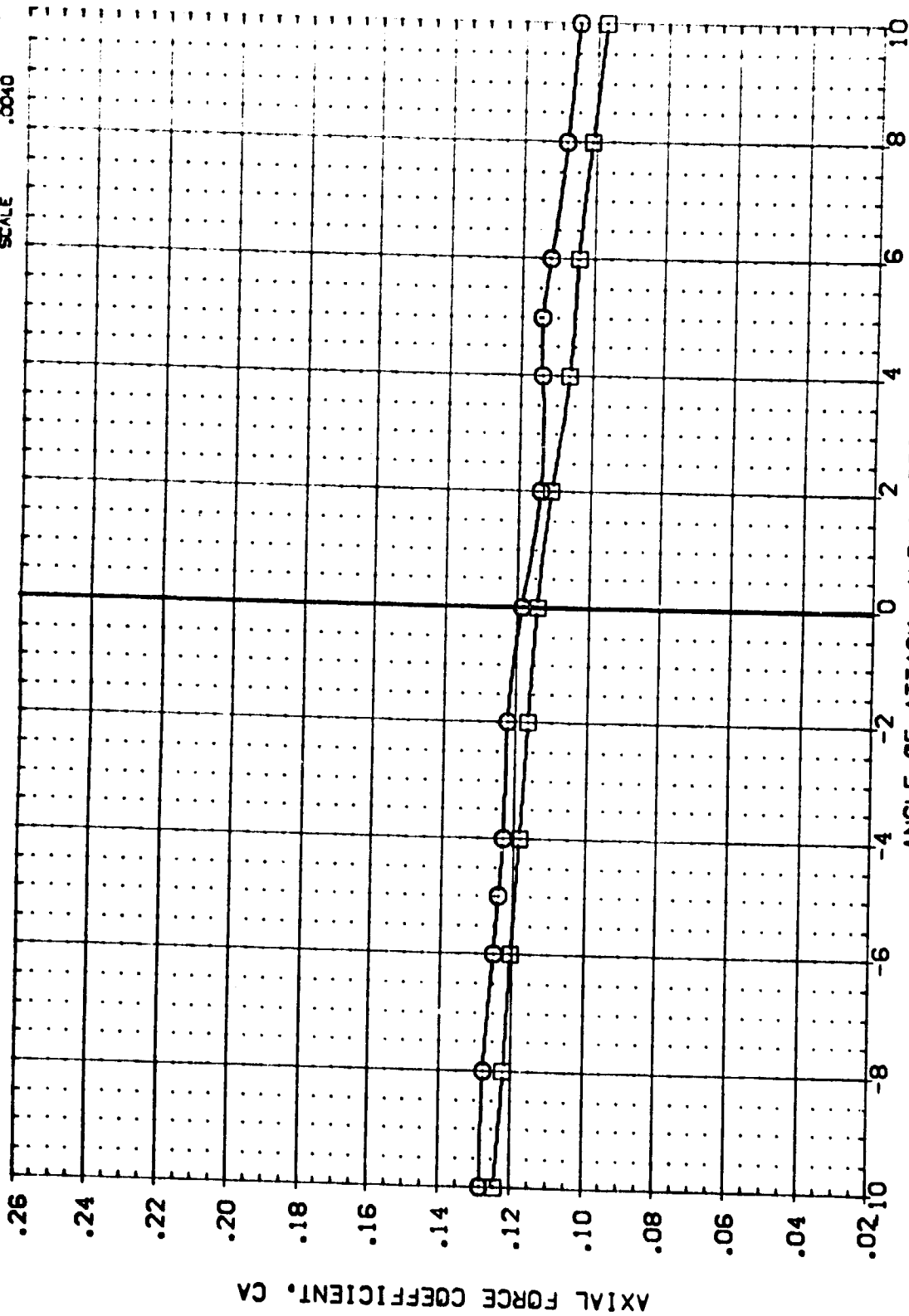
EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED ON 03

(A)MACH = 1.25

DATA SET SYMBOL: \square CONFIGURATION DESCRIPTION:
 MSFC 570(IA3IF)(T9)/(C3)/(S3/2)/(S3/2)Y10
 MSFC 570(IA3IF)(T9)/(C3)/(S3/2)/(S3/2)Y10

ORBITAL SPACER SPADIA SPADAP
 .500 .000 .000
 .500 21.220 .050

REFERENCE INFORMATION
 SREF 6.1980 50. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



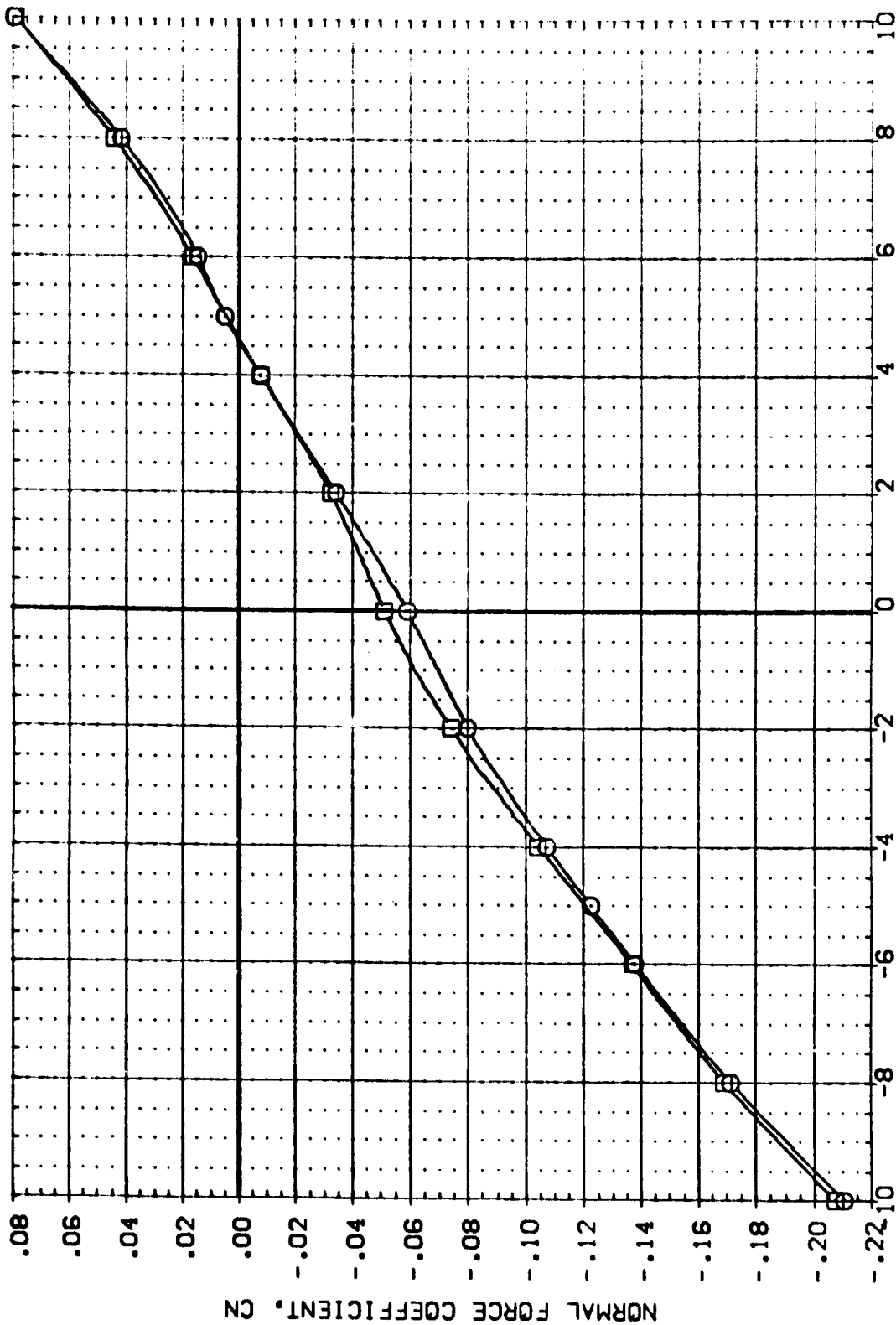
EFFECT ON ET OF SPACERS (FORE AND AFT) ATTACHED ON 03

(M)MACH = 1.25

DATA SET SYMBOL: (083T02) (083T53)
 CONFIGURATION DESCRIPTION: MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)Y20)
 MSFC 570((A31F)(T9)/(03)/(S3/2)/(S3/2)Y20)

ORIGIN: .500
 SPACER: .000
 SPADIA: .000
 SPADAP: .050

REFERENCE INFORMATION:
 SREF: 6.1960 SQ. IN.
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

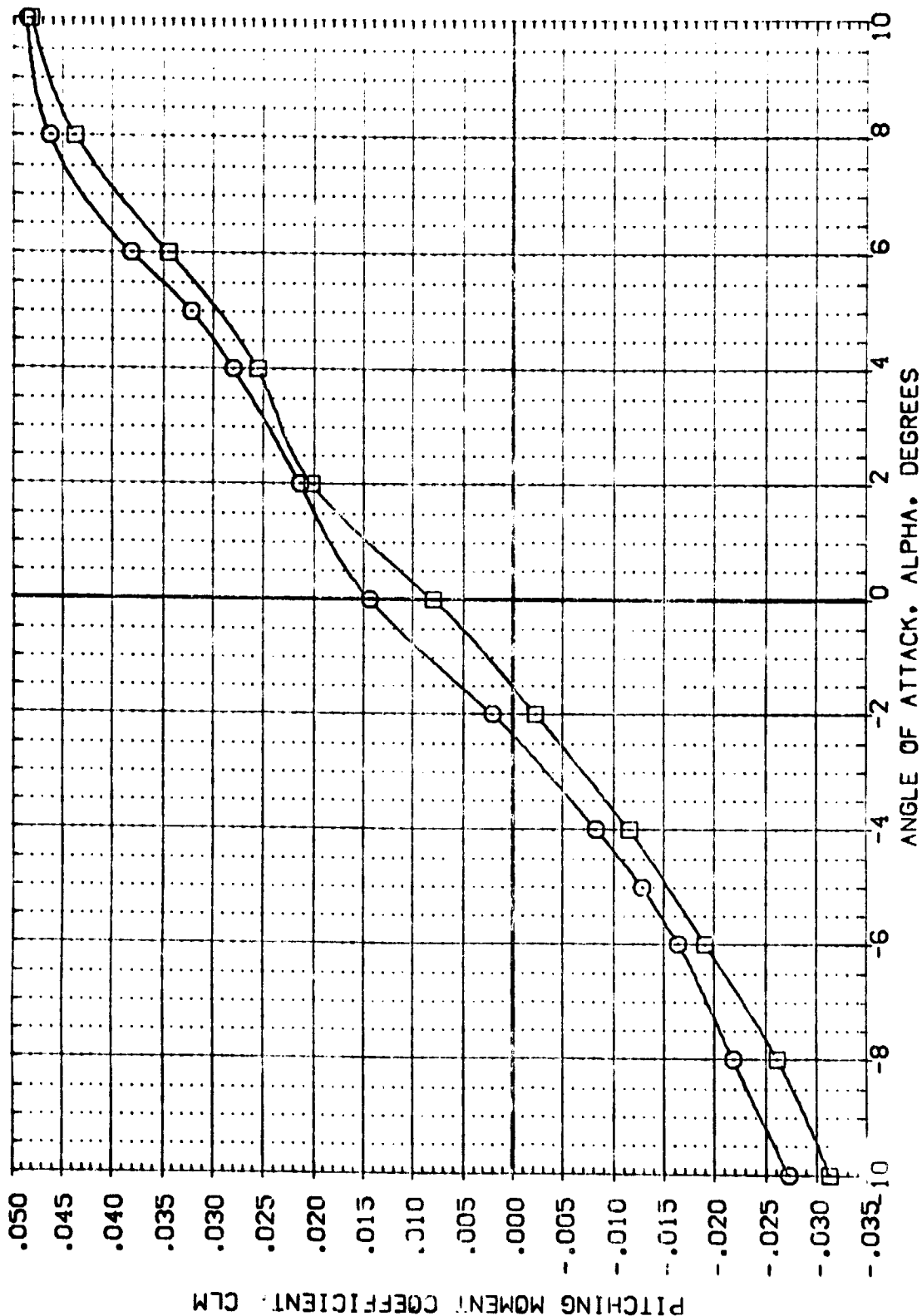
DATA SET SYMBOL: (003102)
(003153)

CONFIGURATION DESCRIPTION

MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2)
MSFC 570 (A31F) (T9) / (03) / (S3/2) / (S3/2) Y20

ORIGIN: .500
SPACER: .000
SPADIA: .000
SPAGAP: .000
SCALE: .000

REFERENCE INFORMATION
SREF: 6.1980
LREF: 5.3130
BREF: 5.3130
XMRP: 2.5450
YMRP: .0000
ZMRP: .0000
SCALE: .0040



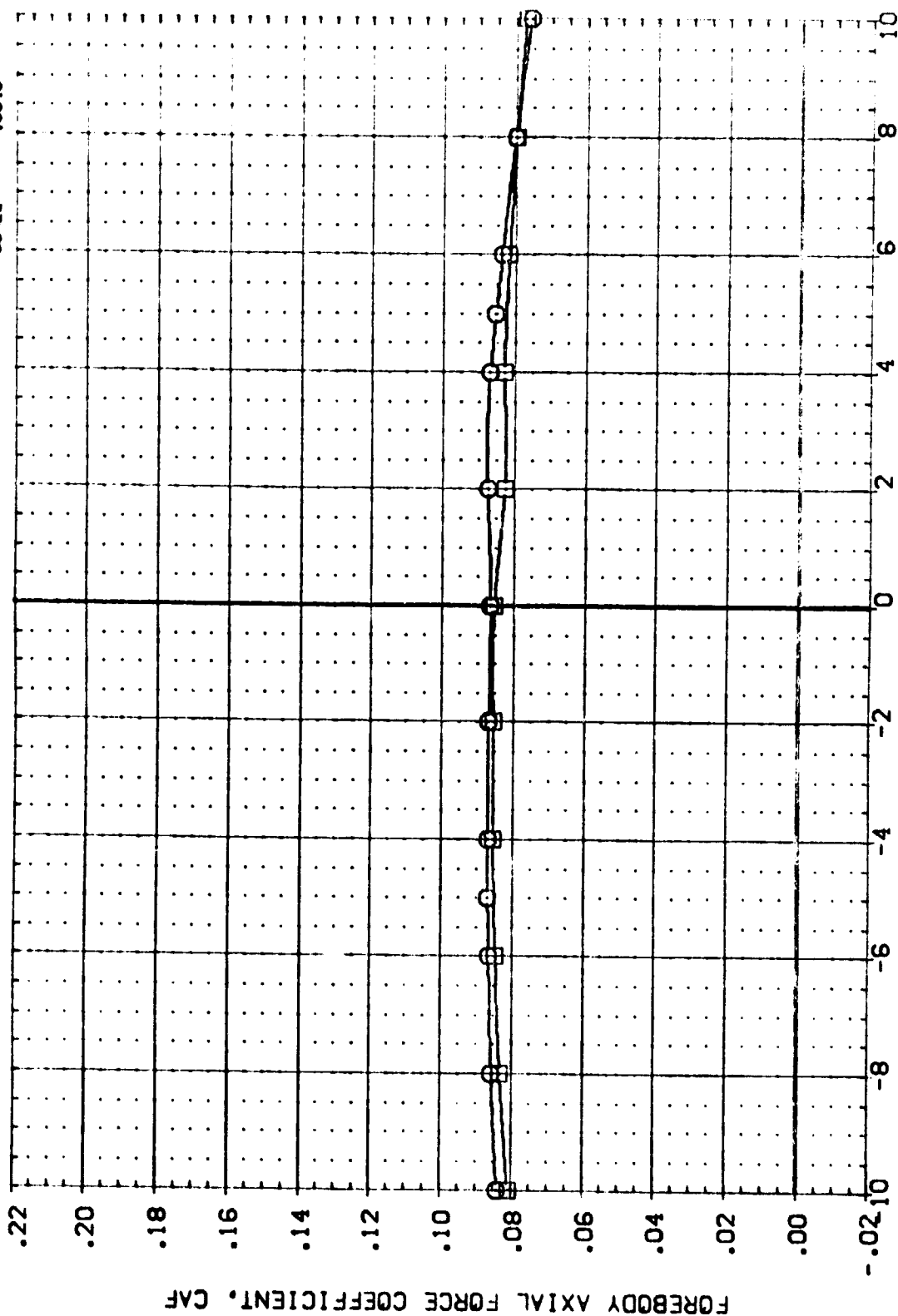
EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO 03

(A) MACH = 1.25

DATA SET SYMBOL: \square CONFIGURATION DESCRIPTION:
 (03T02) MSC 570 (A3IF) (19) / (03) / (S3/2) / (S3/2)
 (03T53) MSC 570 (A3IF) (19) / (03) / (S3/2) / (S3/2) V20

ORIGIN: .500
 SPACER: .000
 SPADIA: .000
 SPAGAP: .000
 SREF: 6.1960
 LREF: 5.3130
 BREF: 5.3130
 YREF: 2.5450
 ZREF: .0000
 SCALE: .0040

REFERENCE INFORMATION:
 S0: IN
 IN: IN
 IN: IN
 IN: IN
 IN: IN
 IN: IN



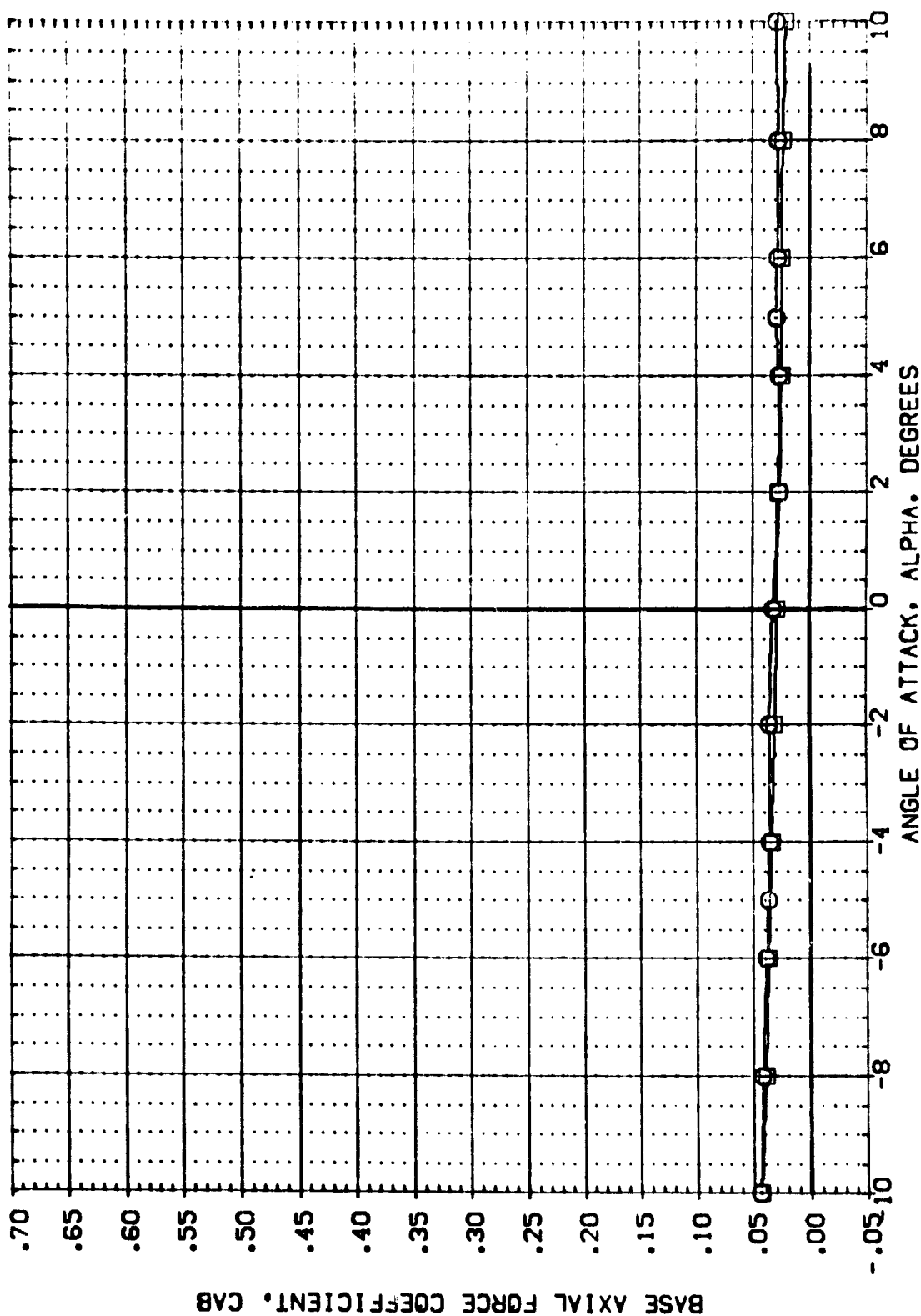
EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25



DATA SET SYMBOL: (D83T02) (D83T53) CONFIGURATION DESCRIPTION: MSFC 570(1A31F)(19)/(03)/(53/2)/(53/2) MSFC 570(1A31F)(19)/(03)/(53/2)/(53/2)Y20

ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION			
.500	.000	.000	.000	SREF	6.1980	SG	IN
.500	.000	.200	.050	LREF	5.3130	IN	IN
				BREF	5.3130	IN	IN
				XMRP	2.5450	IN	IN
				YMRP	.0000	IN	IN
				ZMRP	.0000	IN	IN
				SCALE	.0040		



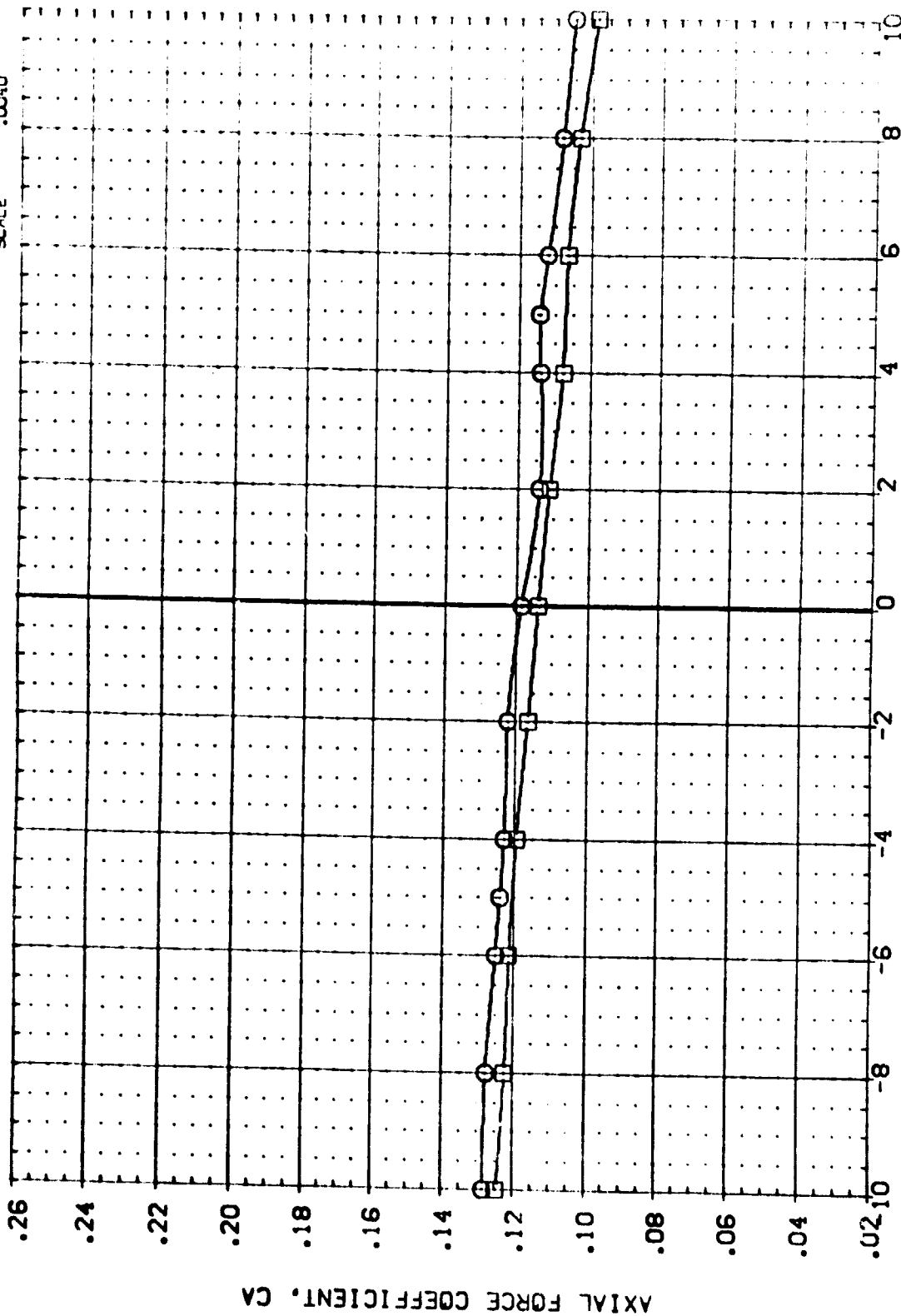
EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (083102)
 (083153)
 CONFIGURATION DESCRIPTION:
 MSFC 5701(A31F)(19)/(03)/(S3/21)/(S3/2)
 MSFC 5701(A31F)(19)/(03)/(S3/21)/(S3/2)V20

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .000 .050

REFERENCE INFORMATION:
 SREF 6.1980 SC. 11
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



ANGLE OF ATTACK, ALPHA, DEGREES

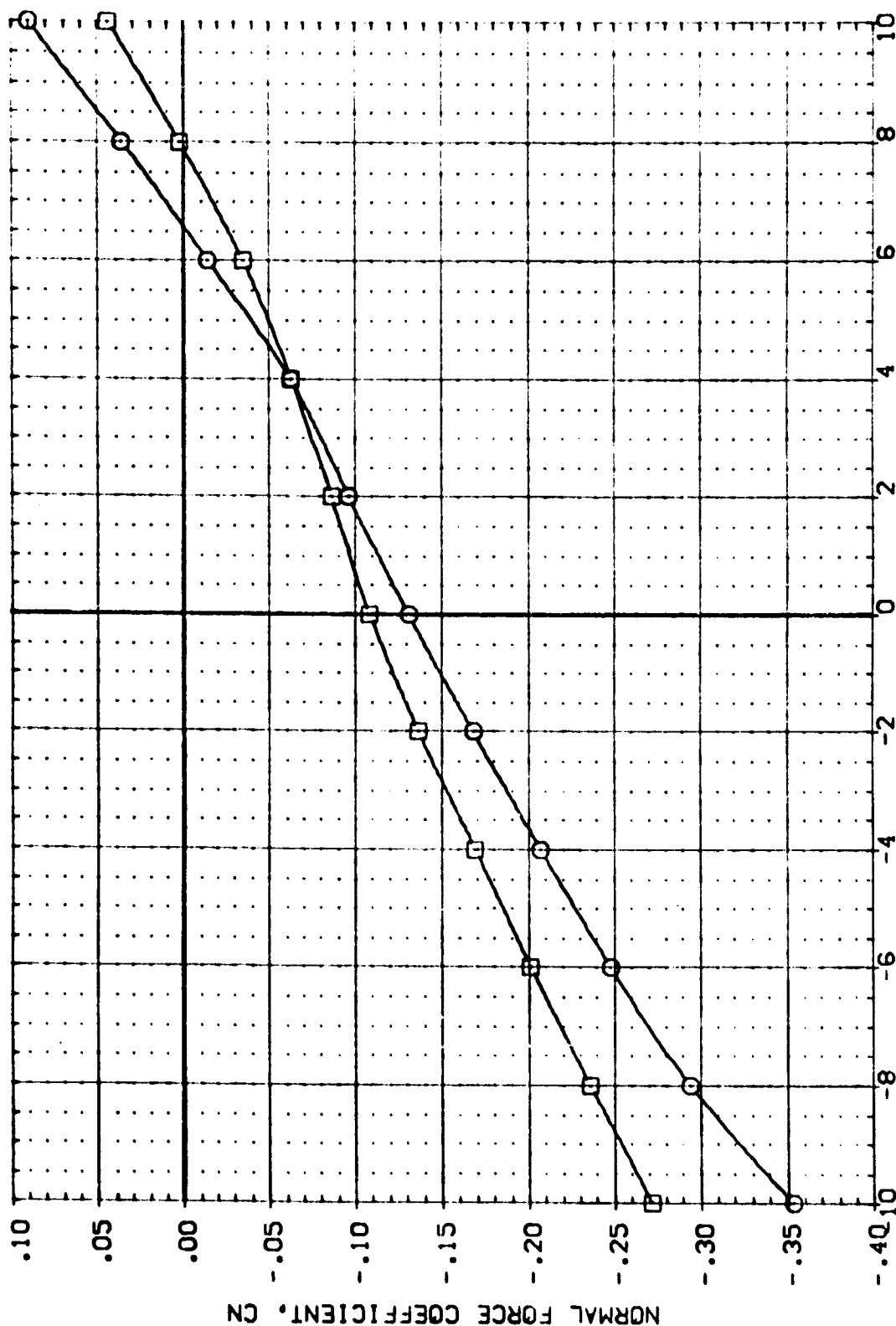
EFFECT ON ET OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (080134) (080157) CONFIGURATION DESCRIPTION: MSFC 570((1A31F)(T9)(US)(S3/2)/(03)/(S3/2)) MSFC 570((1A31F)(T9)(US)(S3/2)/(03)/(S3/2))Y20


ORBITING: .500 .500 SPACER: .000 21.000 SPADIA: .000 .200 SPAC UP: .000 .050

REFERENCE INFORMATION:
 SREF: 6.1980 IN
 LREF: 5.3130 IN
 BREF: 5.3130 IN
 XMRP: 2.5450 IN
 YMRP: .0000 IN
 ZMRP: .0000 IN
 SCALE: .0040



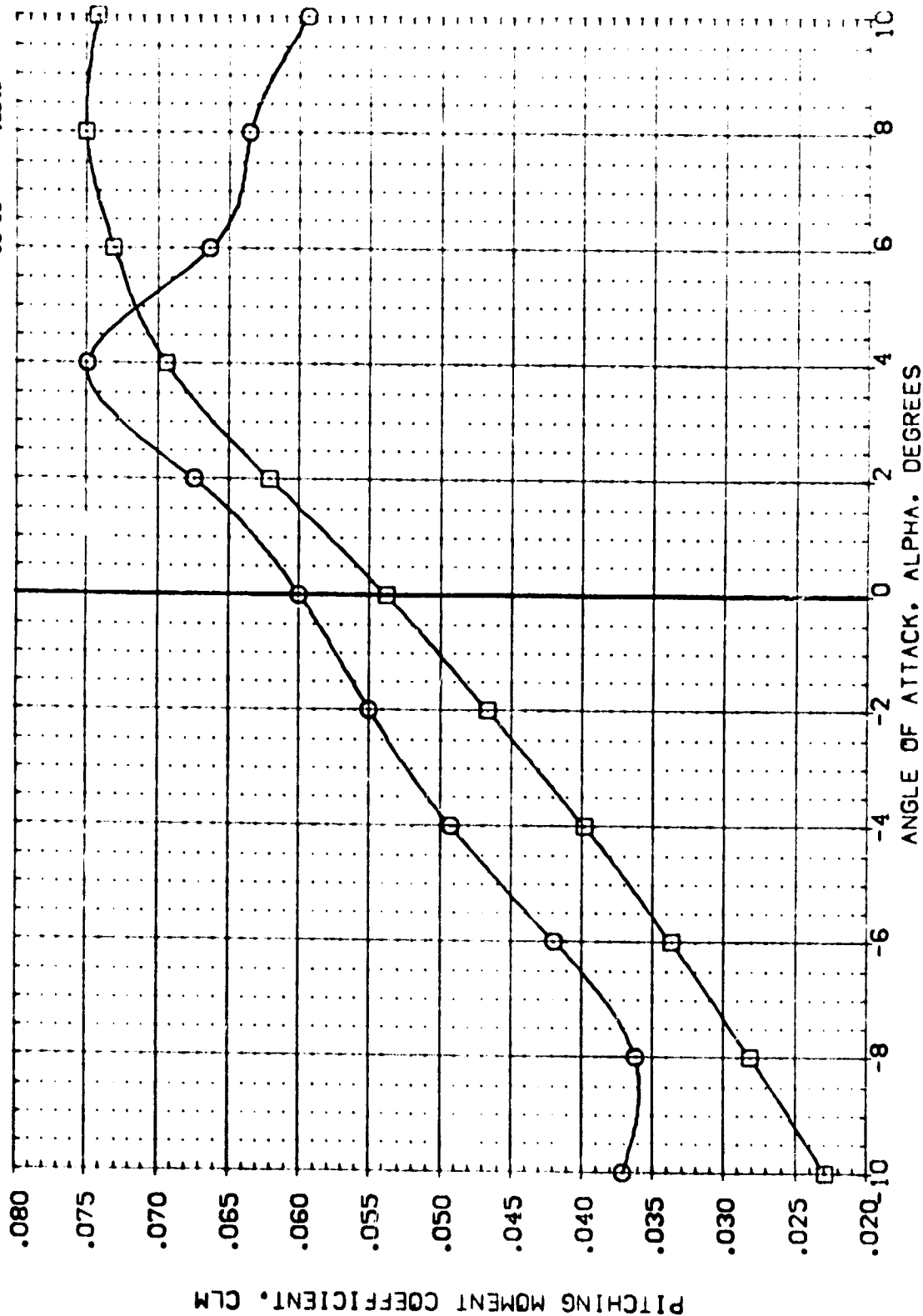
EFFECT ON ET OF FWD SPACER ONLY MOUNTED ON 03 (WITH ATTACH HARDWARE)

(A)MACH = 1.24

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION:
 (080T34) MSC 570(1A3IF)(19)(US)(S3/2)/(03/2)/(S3/2)
 (080T57) MSC 570(1A3IF)(19)(US)(S3/2)/(03/2)/(S3/2)Y20

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.000 .050

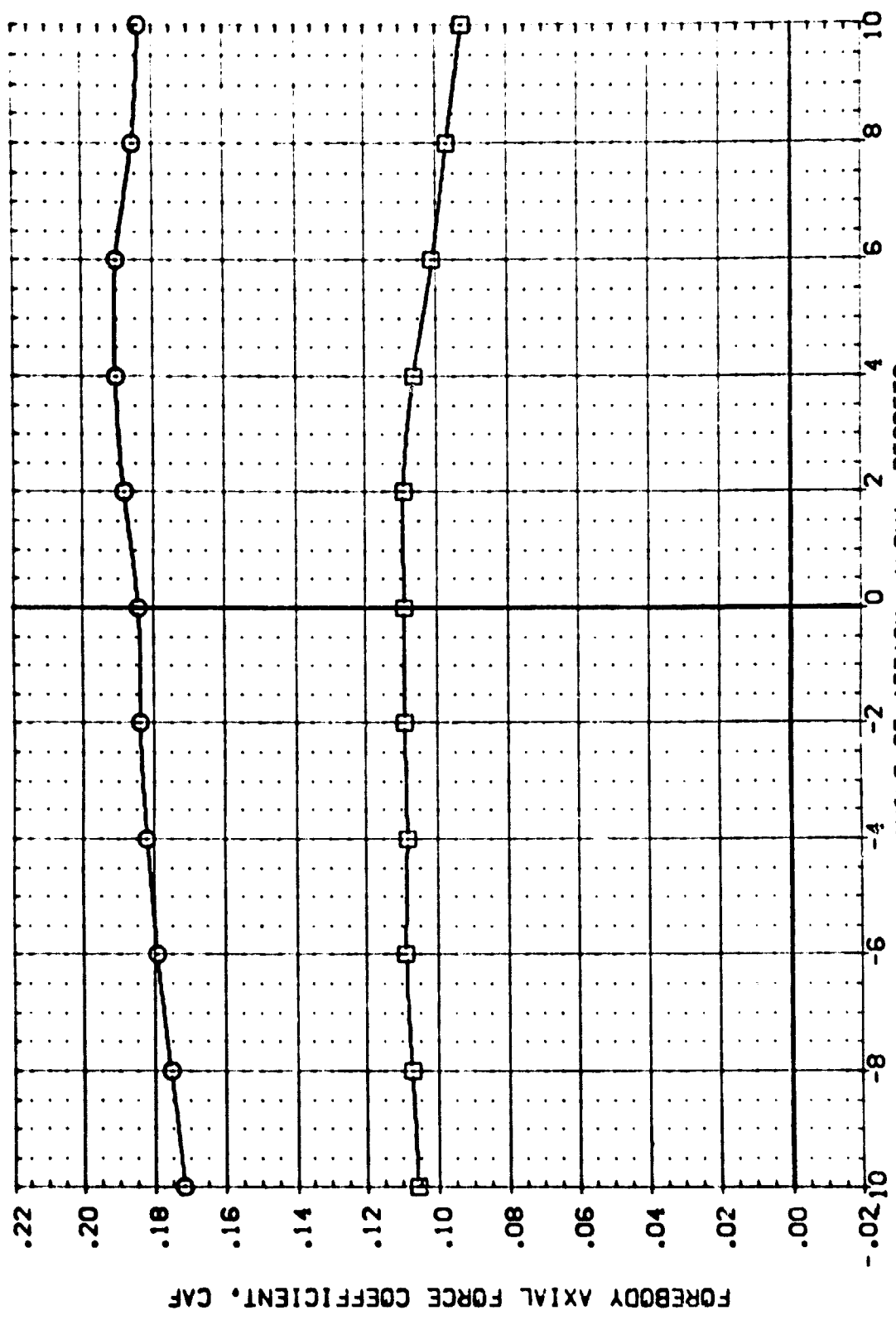
REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XREF 2.5490 IN.
 YREF .0000 IN.
 ZREF .0000 IN.
 SCALE .0040



EFFECT ON ET OF FWD SPACER ONLY MOUNTED ON 03 (WITH ATTACH HARDWARE)

(A)MACH = 1.24

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORIGIN	SPACER	SPACIA	SPAGAP	REFERENCE INFORMATION
(000134)	REFC 570 (A31F) (T9) (US) (S3/2) / (03) / (S3/2)	.500	.000	.000	.000	SREF 6.1980 S3 IN
(000137)	REFC 570 (A31F) (T9) (US) (S3/2) / (03) / (S3/2) / Y20	.500	21.000	.200	.050	LREF 5.3130
						BREF 5.3130
						XMRP 2.5490
						YMRP .0000
						ZMRP .0000
						SCALE .0010



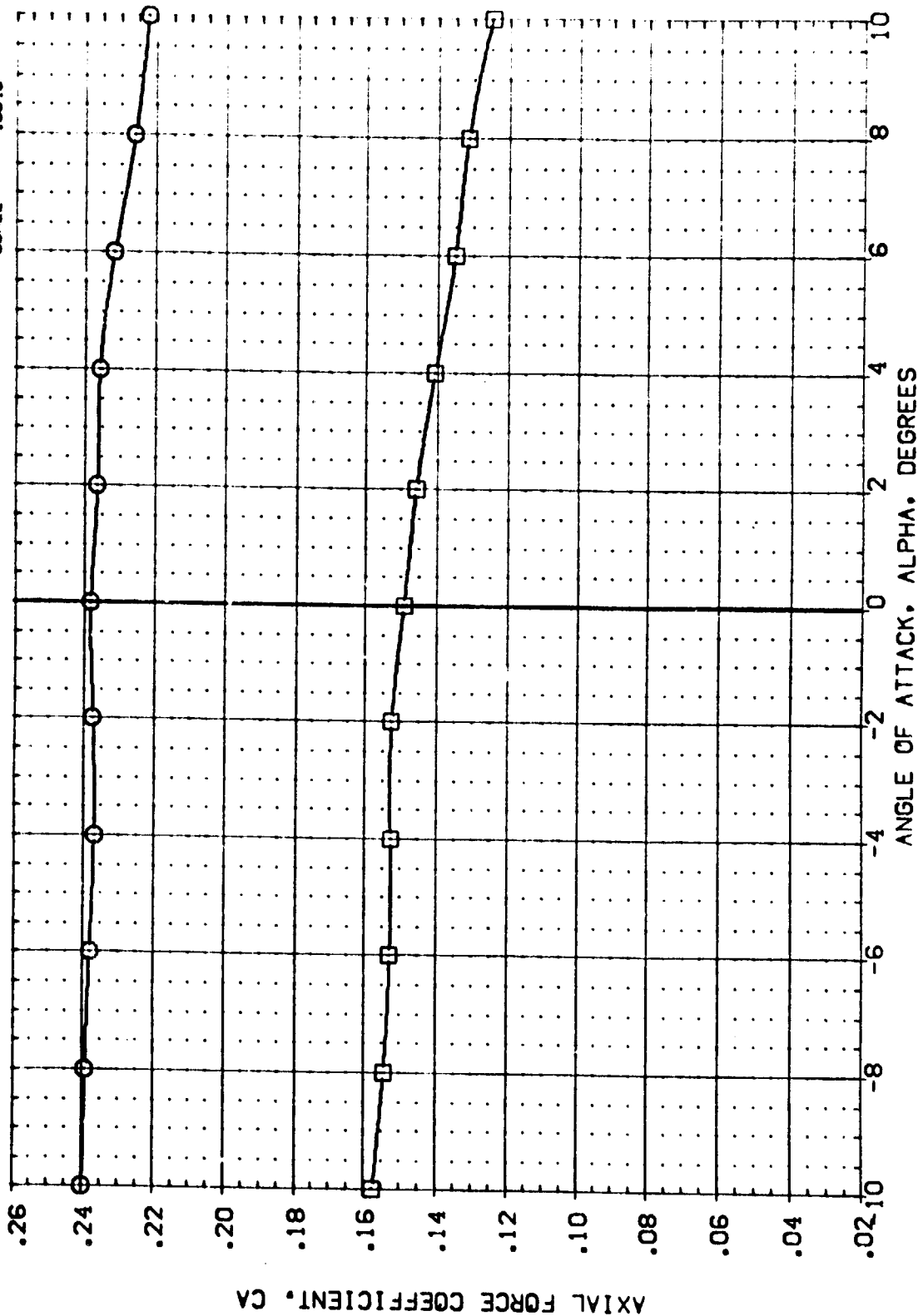
EFFECT ON ET OF FWD SPACER ONLY MOUNTED ON 03 (WITH ATTACH HARDWARE)

(A)MACH = 1.24

DATA SET SYMBOL: (030734) (030757) CONFIGURATION DESCRIPTION: MSFC 570(IASIF)(TS)(US)(S3/2)/(03)/(S3/2) MSFC 570(IASIF)(TS)(US)(S3/2)/(03)/(S3/2)Y20

ORBITING SPACER SPADIA SPAGAP REFERENCE INFORMATION

ORBITING	SPACER	SPADIA	SPAGAP	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE
.500	.000	.000	.000	6.1960	5.3130	5.3130	2.5480	.0000	.0000	.0010
.500	.000	.200	.050	1.000	1.000	1.000	1.000	1.000	1.000	1.000



EFFECT ON ET OF FWD SPACER ONLY MOUNTED ON 03 (WITH ATTACH HARDWARE)

(A)MACH = 1.24

DATA SET SYMBOL: 8
 CONFIGURATION DESCRIPTION: MSFC 570(IA3IF)(I9)/(O3)/(S3/2)Y30
 MSFC 570(IA3IF)(I9)/(O3)/(S3/2)/(S3/2)Y30

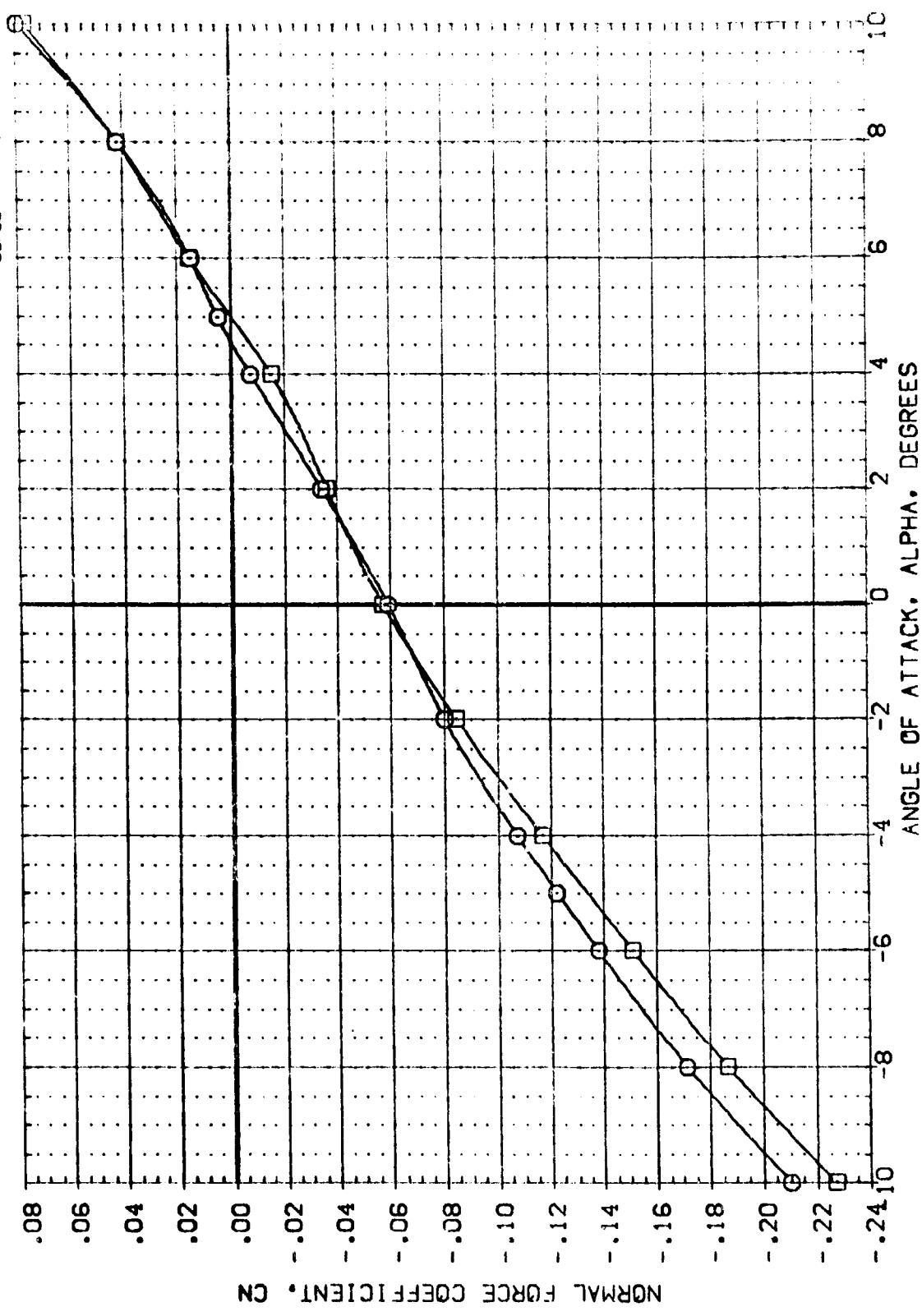
ORBITAL: .500
 .500

SPACER: .000
 .220

SPADIA: .000
 .200

SPAGAP: .000
 .050

REFERENCE INFORMATION:
 SREF: 6.1990
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0040



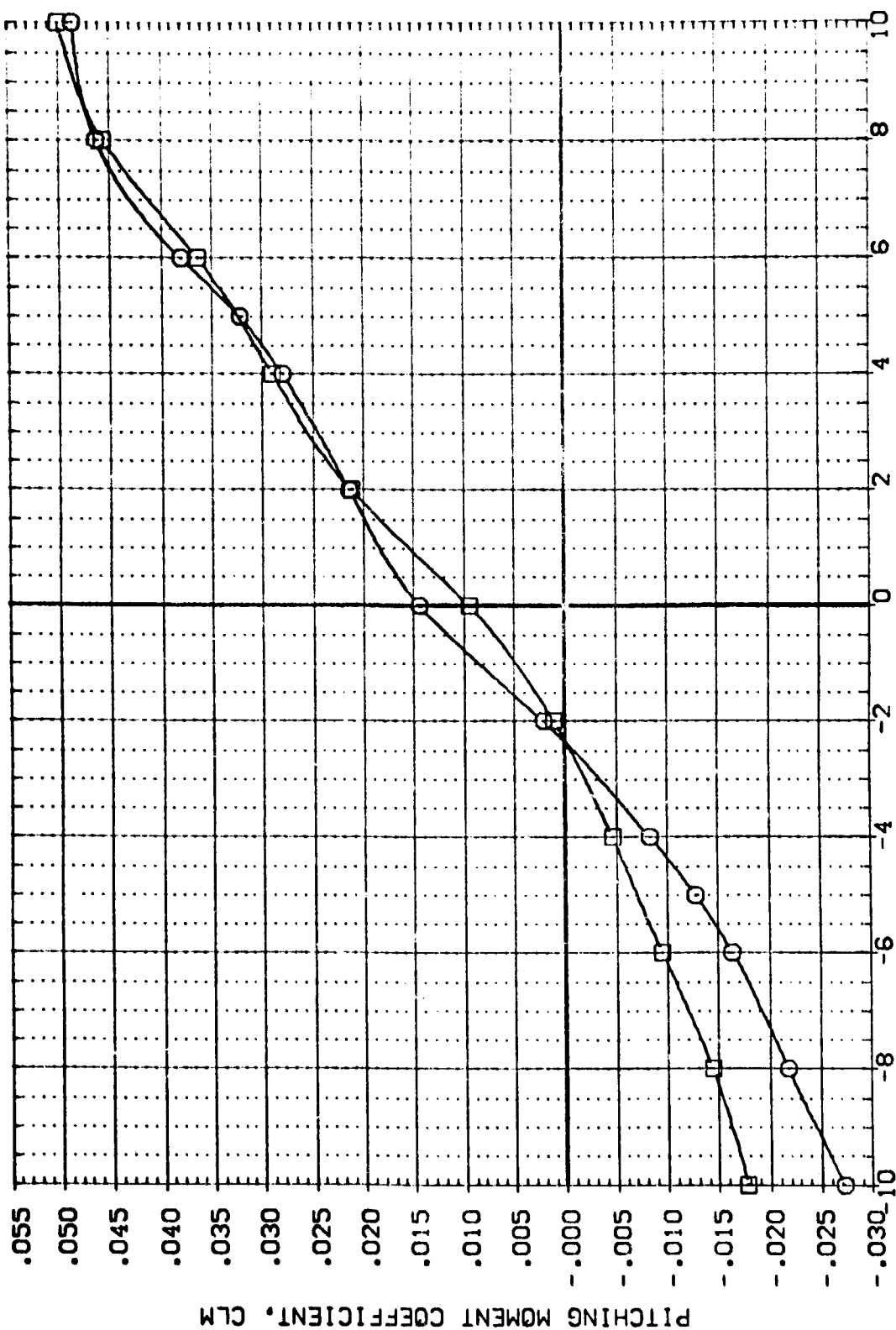
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083T02) MSFC 570(1A31F)(79)/(03)/(S3/2)/(S3/2)
 (083T54) MSFC 570(1A31F)(79)/(03)/(S3/2)/(S3/2)Y30

ORIGIN SPACER SPADIA SPAGAP
 .500 .000 .000 .000
 .500 .220 .200 .050

REFERENCE INFORMATION
 SPREF 6.1990 SQ. IN
 LRREF 5.3130 IN.
 BRREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



ANGLE OF ATTACK, ALPHA, DEGREES

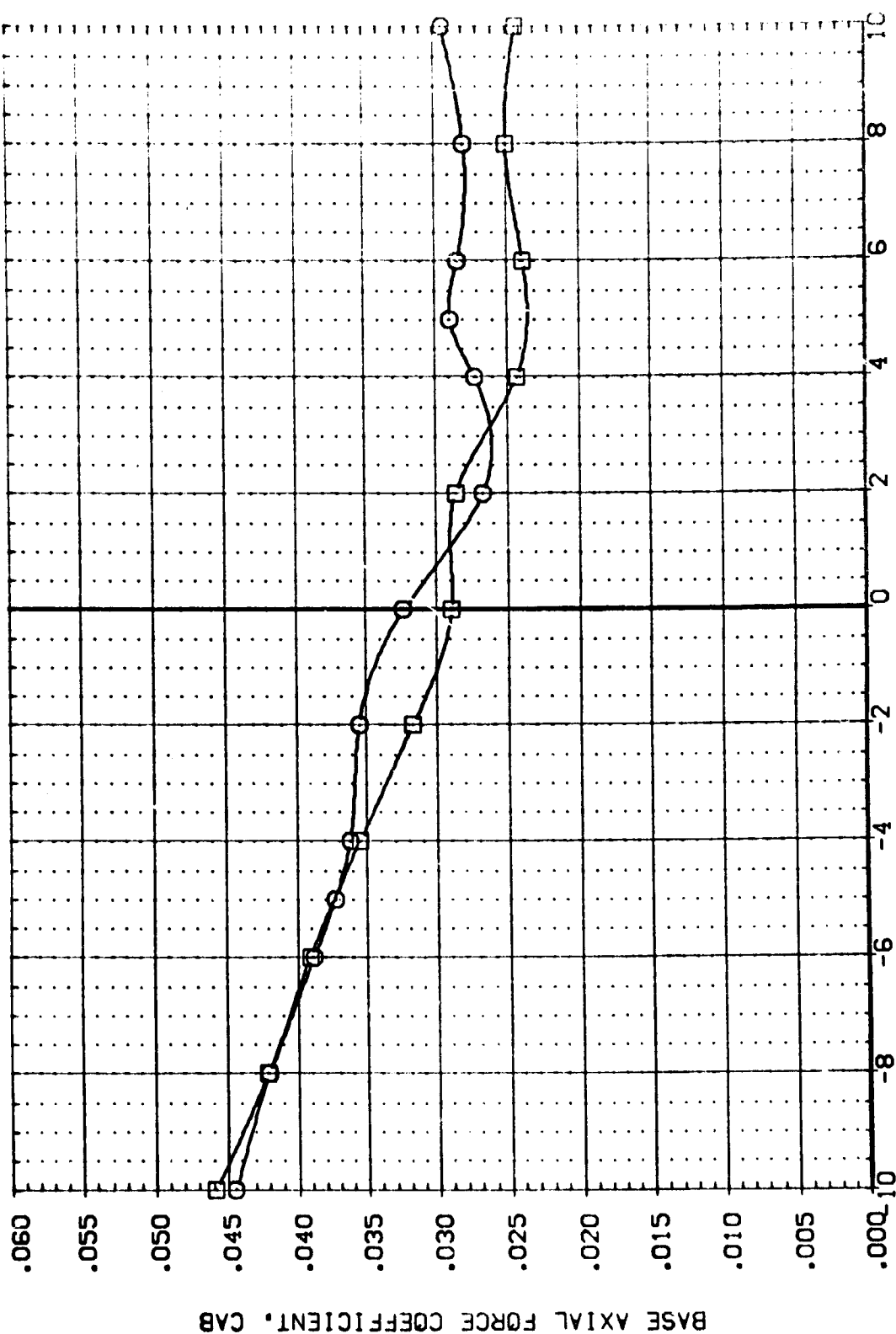
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: [083T02] [083T54]
 CONFIGURATION DESCRIPTION:
 MSFC 570(I A31F)(T9)/(03)/(S3/2)
 MSFC 570(I A31F)(T9)/(03)/(S3/2)(Y30)

ORBITAL: .500
 SPACER: .000
 SPADIA: .000
 SPAGAP: .000
 .220

REFERENCE INFORMATION:
 SREF: 6.1590
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010
 Z: .0010



ANGLE OF ATTACK, ALPHA, DEGREES

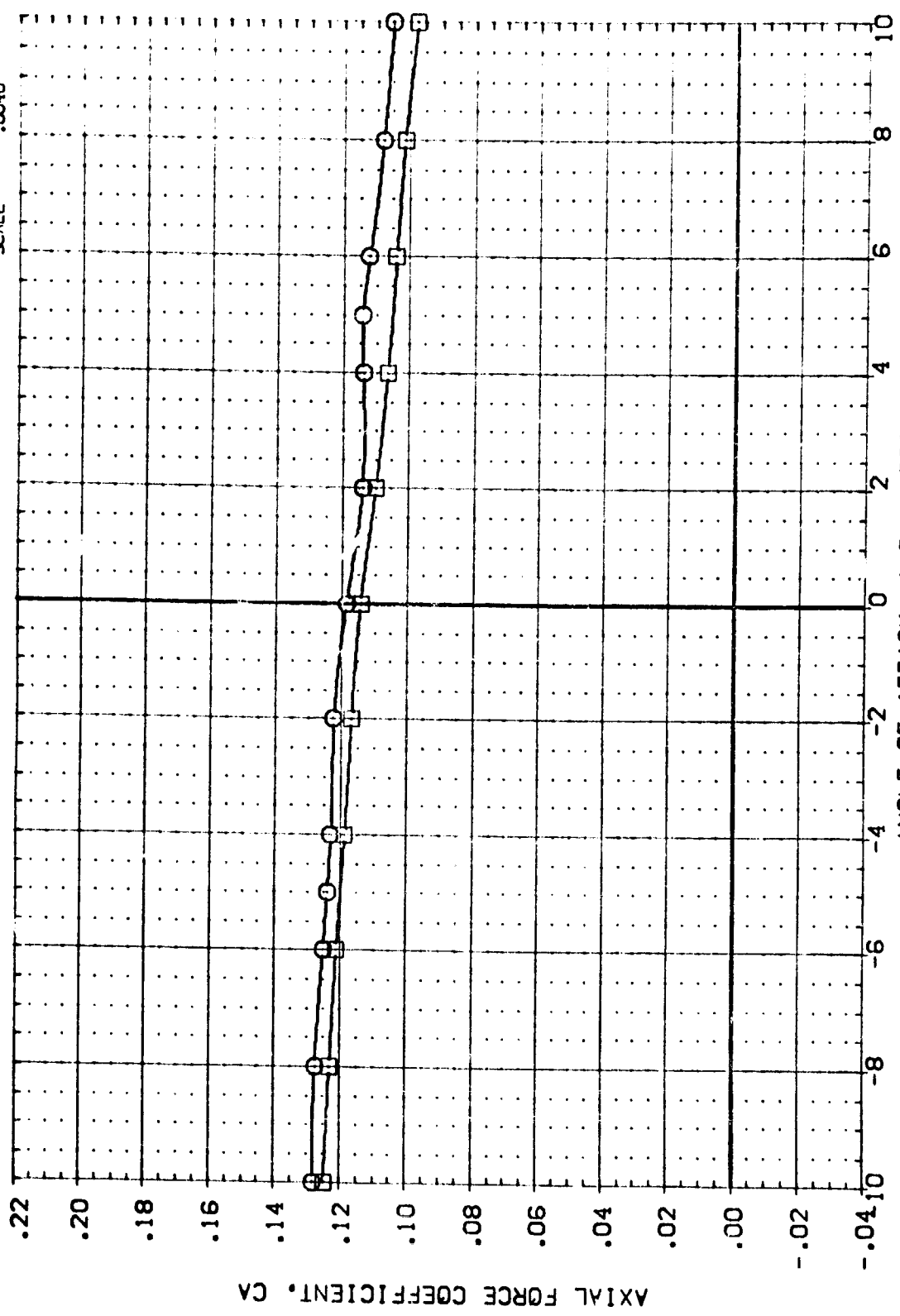
EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (D83T02) HSEC 570(1A31F)(19)/(03)/(S3/2)/(S3/2)
 (D83T54) HSEC 570(1A31F)(19)/(03)/(S3/2)/(S3/2)V30

ORBIT SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .220 .050

REFERENCE INFORMATION
 SREF 6.1980 50. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010



EFFECT ON ET OF AFT SPACER ONLY ATTACHED TO 03

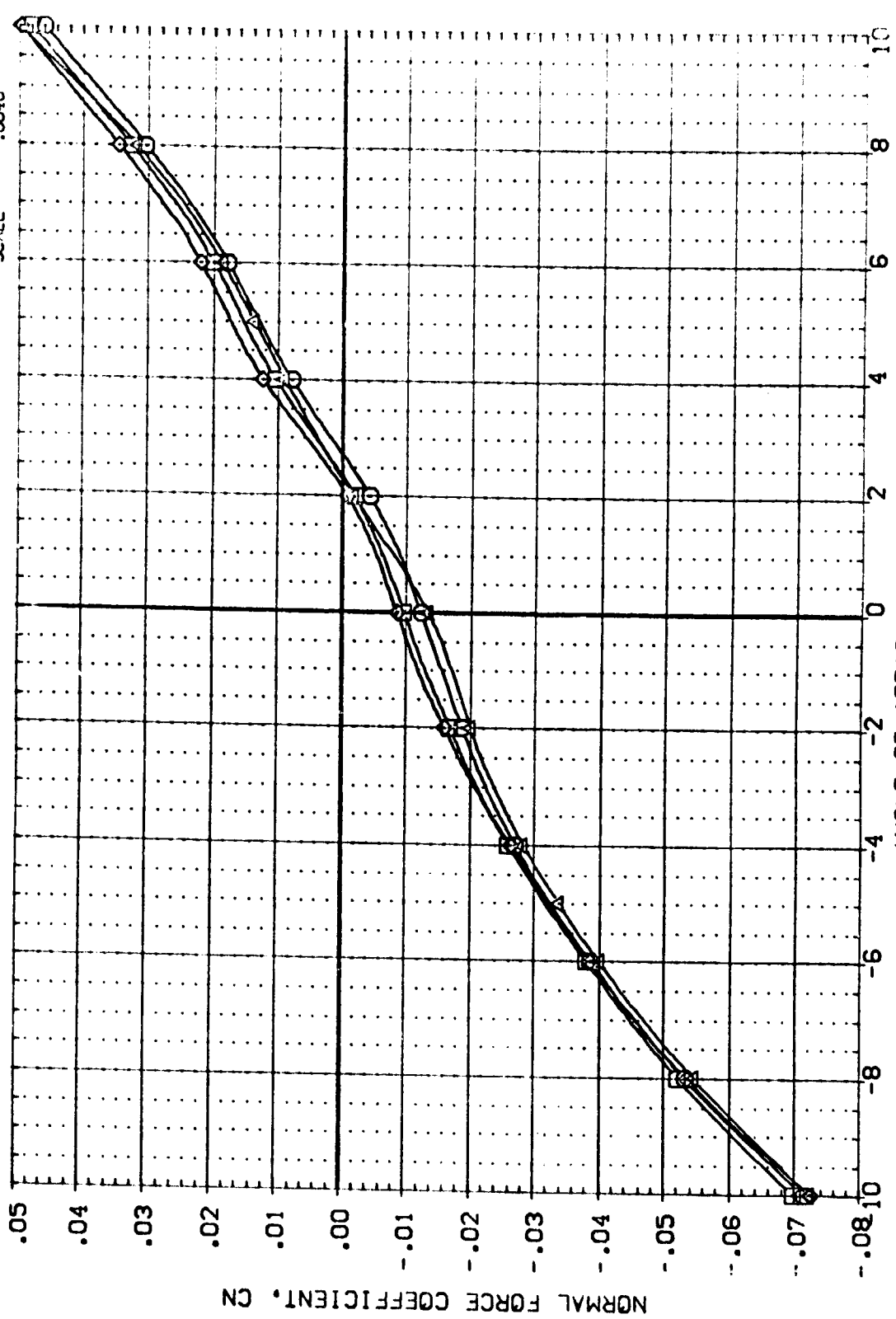
CA/MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(DB3S40)	MSFC 570(IA3IF)(S3/2)/(O3)/(I9)/(S3/2)YIE
(DB3S41)	MSFC 570(IA3IF)(S3/2)/(O3)/(I9)/(S3/2)YIE
(DB3S42)	MSFC 570(IA3IF)(S3/2)/(O3)/(I9)/(S3/2)YIE
(DB3S02)	MSFC 570(IA3IF)(S3/2)/(O3)/(I9)/(S3/2)YIE

ORBITAL SPACER SPADIA SPAGAP REFERENCE INFORMATION

ORBITAL	SPACER	SPADIA	SPAGAP	SREF	9720	SO:
.500	7.800	.100	.050	LREF	5.3130	ZZ:
.500	9.100	.200	.050	BREF	5.3130	ZZ:
.500	11.120	.300	.000	XMRP	2.5450	ZZ:
.500		.000		YMRP	.0000	ZZ:
				ZMRP	.0000	ZZ:
				SCALE	.0040	



EFFECT ON SRB OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

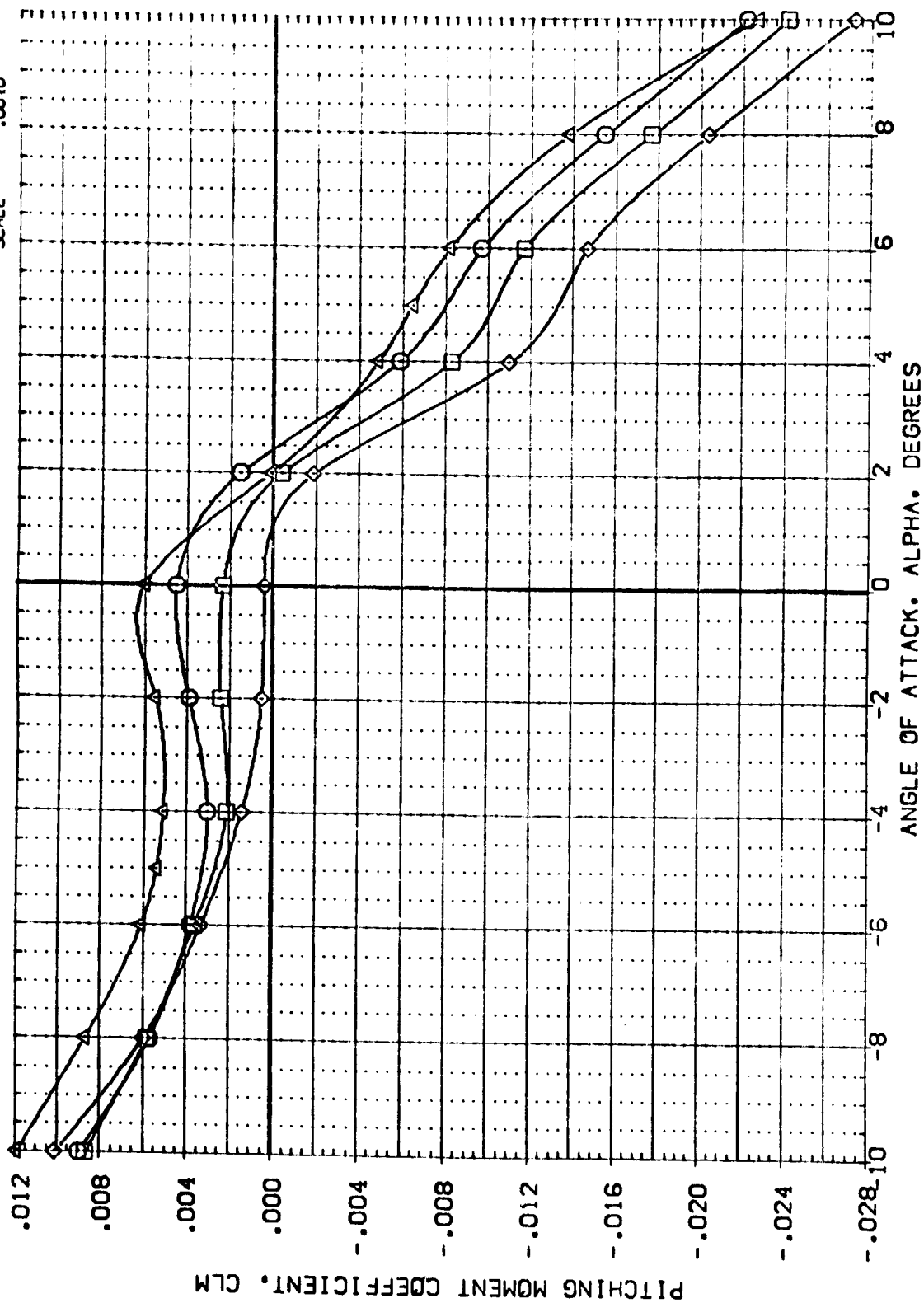


DATA SET SYMBOL CONFIGURATION DESCRIPTION

(C83S40) MSFC 570((A3)F)((S3/2)/(03))((T9))((S3/2))YIE
 (C83S41) MSFC 570((A3)F)((S3/2)/(03))((T9))((S3/2))YIE
 (C83S42) MSFC 570((A3)F)((S3/2)/(03))((T9))((S3/2))YIE
 (C83S02) MSFC 570((A3)F)((S3/2)/(03))((T9))((S3/2))YIE

ORBITING SPACER SPADIA SPAGAP
 .500 7.800 .100 .050
 .500 9.100 .200 .050
 .500 11.120 .300 .050
 .500 .000 .000 .000

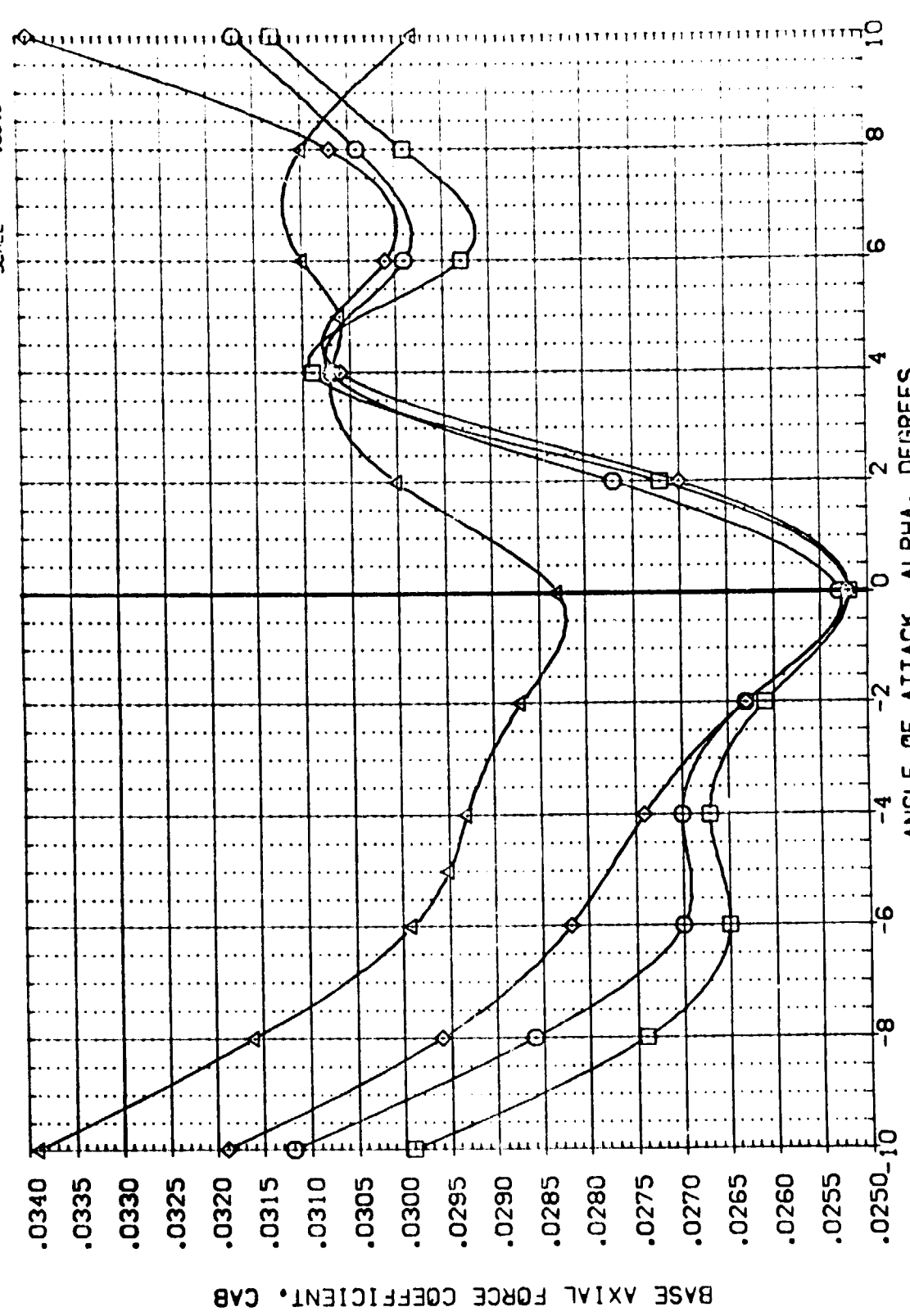
REFERENCE INFORMATION
 SREF 9720 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



EFFECT ON SRB OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(C83540)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)VIIE	.500	7.800	.100	.050	SREF 9720
(C83541)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)VIIE	.500	9.100	.200	.050	LREF 5.3130
(C83542)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)VIIE	.500	11.120	.300	.050	BREF 5.3130
(C83502)	MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)	.500	.000	.000	.000	VMRP 2.5190
						ZMRP .0000
						SCALE .0040



EFFECT ON SRB OF SPACER DIAMETER - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25



DATA SET SYMBOL: (03S41) (03S43) (03S02)

CONFIGURATION DESCRIPTION:
 MSC 570 (A31F)(S3/2)/(03)/(19)/(S3/2)YIE
 MSC 570 (A31F)(S3/2)/(03)/(19)/(S3/2)YIE
 MSC 570 (A31F)(S3/2)/(03)/(19)/(S3/2)YIE

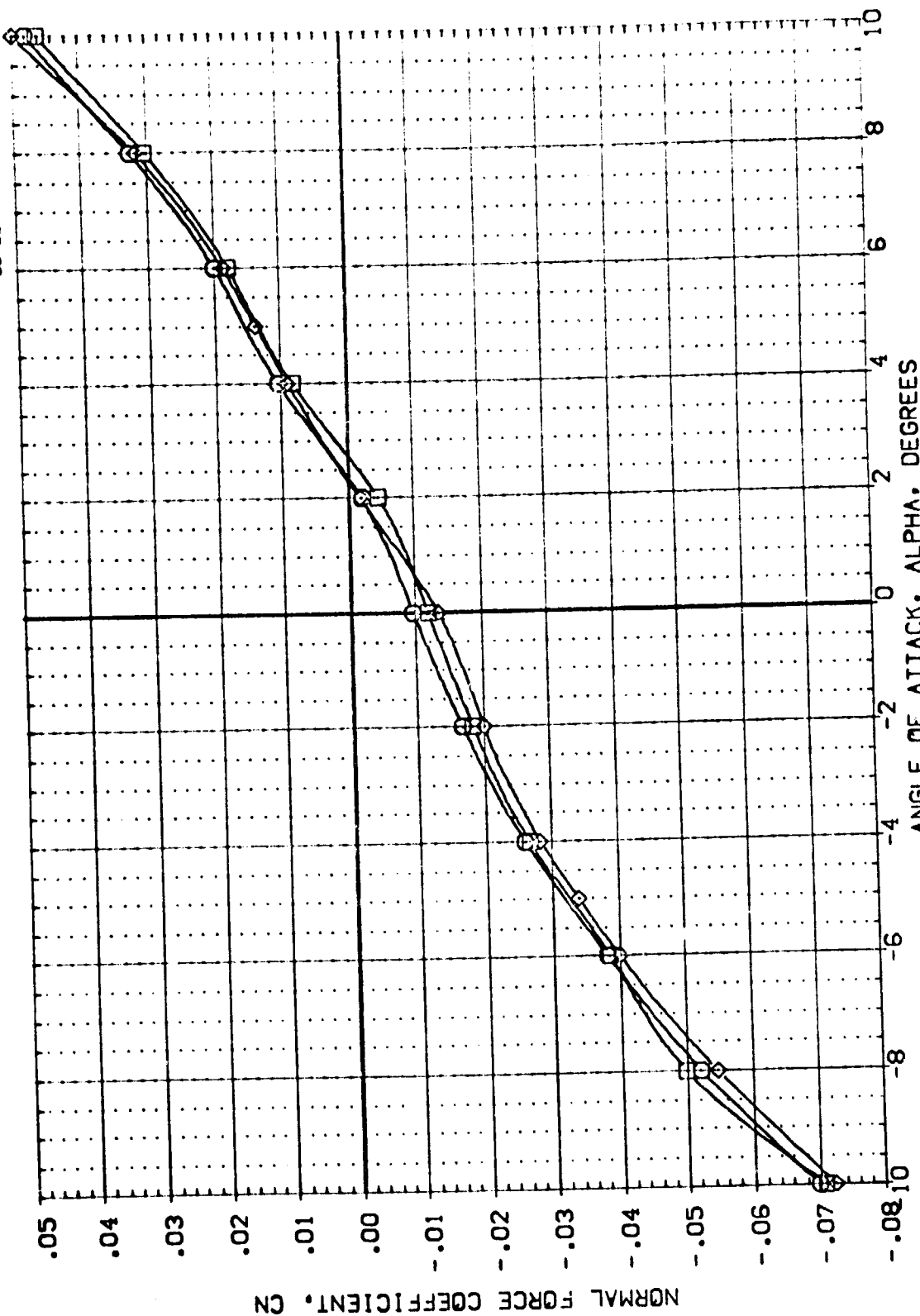
ORBITAL: .500 .500 .500

SPACER: 9.100 13.140 .000

SPADIA: .200 .200 .000

SPAGAP: .050 .100 .000

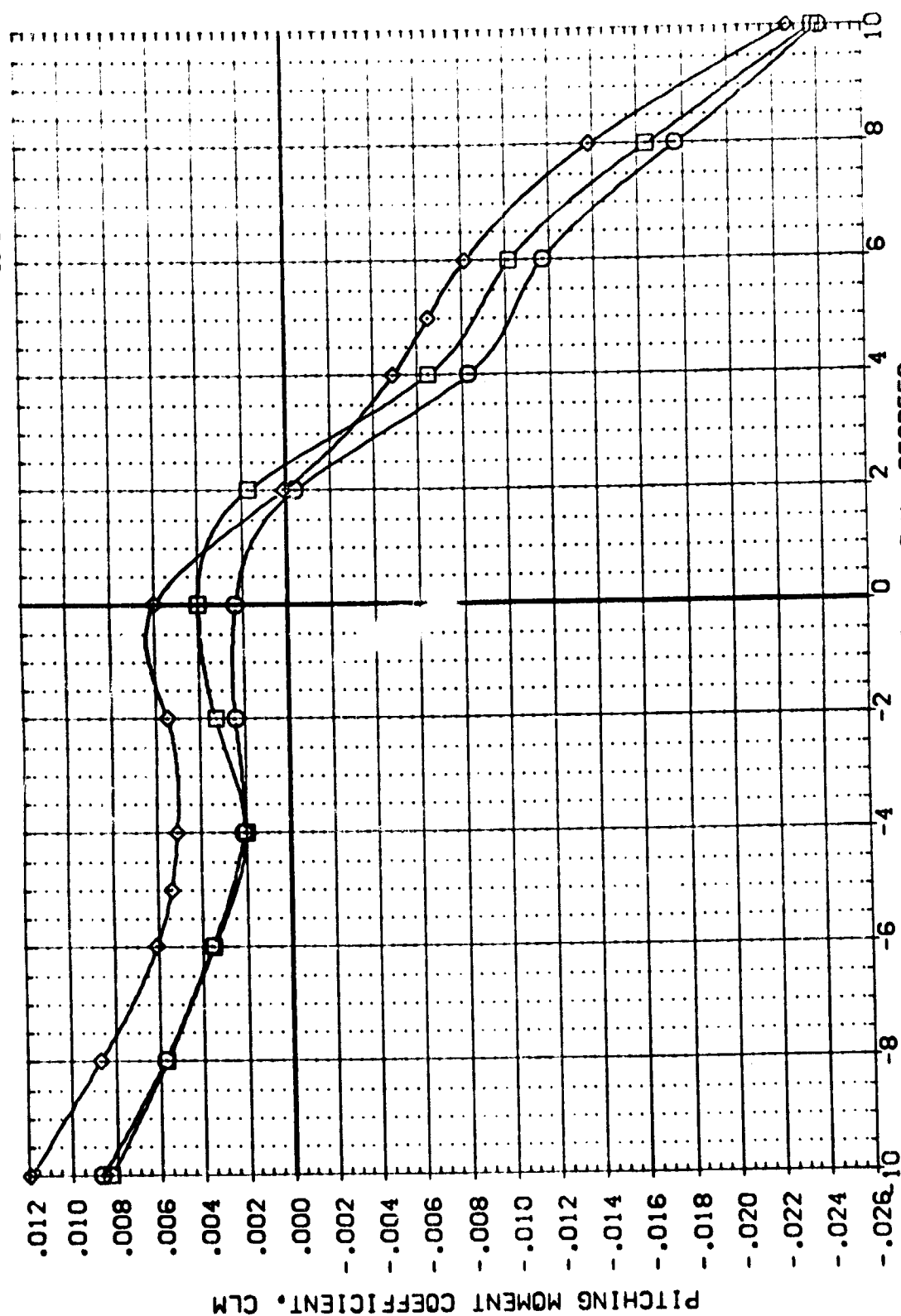
REFERENCE INFORMATION:
 SREF: 9720 IN
 LREF: 5.3130 IN
 BREF: 5.3130 IN
 XMRP: 2.5450 IN
 YMRP: .0000 IN
 ZMRP: .0000 IN
 SCALE: .0040



EFFECT ON SRB OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

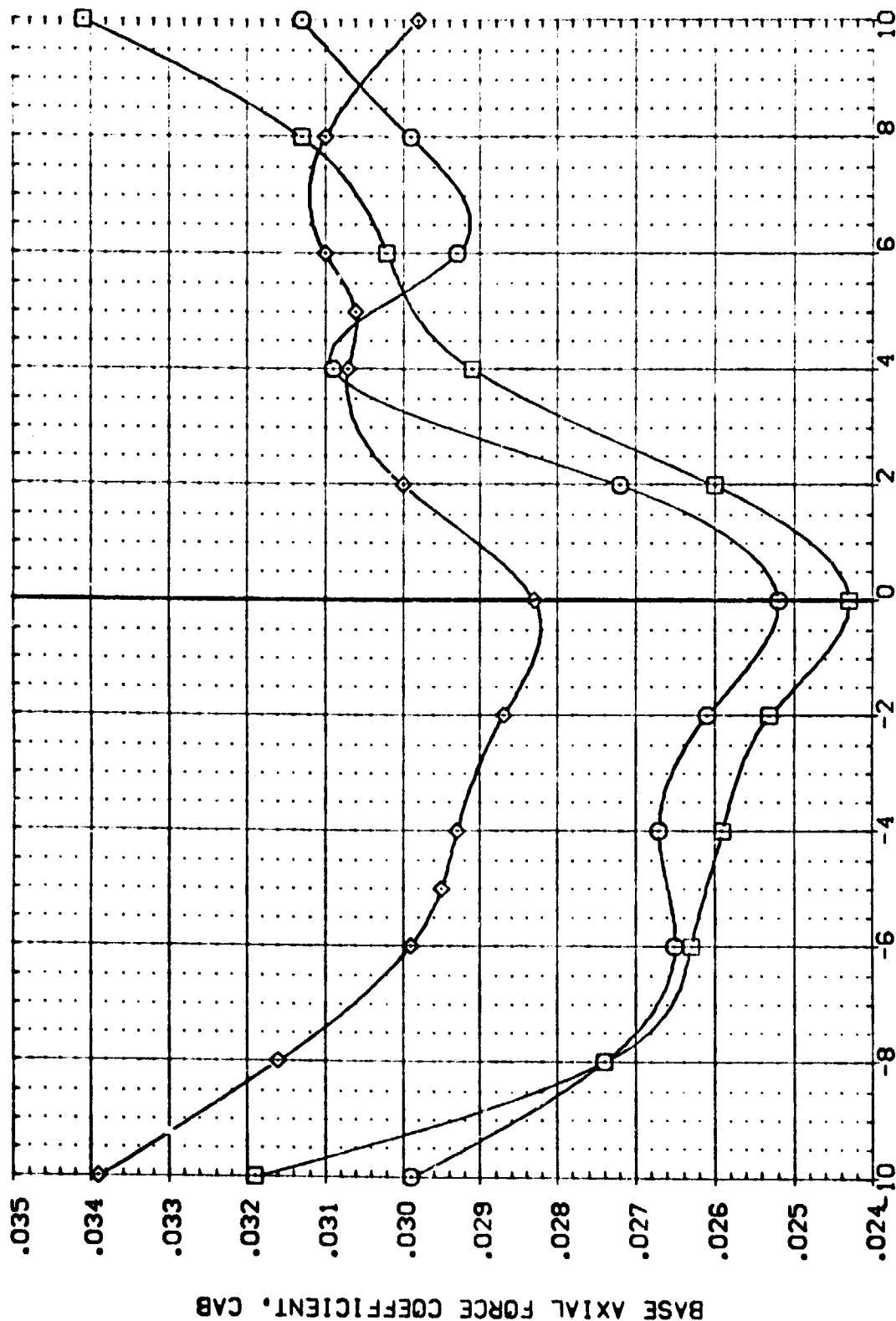
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(083541)	MSFC 570(IA31F)(S3/2)/(03)/(19)/(S3/2)VE	.500	9.100	.200	.050	SREF .9720
(083543)	MSFC 570(IA31F)(S3/2)/(03)/(19)/(S3/2)VE	.500	13.140	.200	.100	LREF 5.3130
(083502)	MSFC 570(IA31F)(S3/2)/(03)/(19)/(S3/2)VE	.500	.000	.000	.000	BREF 2.5410
						XMRP .0000
						YMRP .0000
						TMRP .0000
						SCALE .0040



EFFECT ON SRB OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

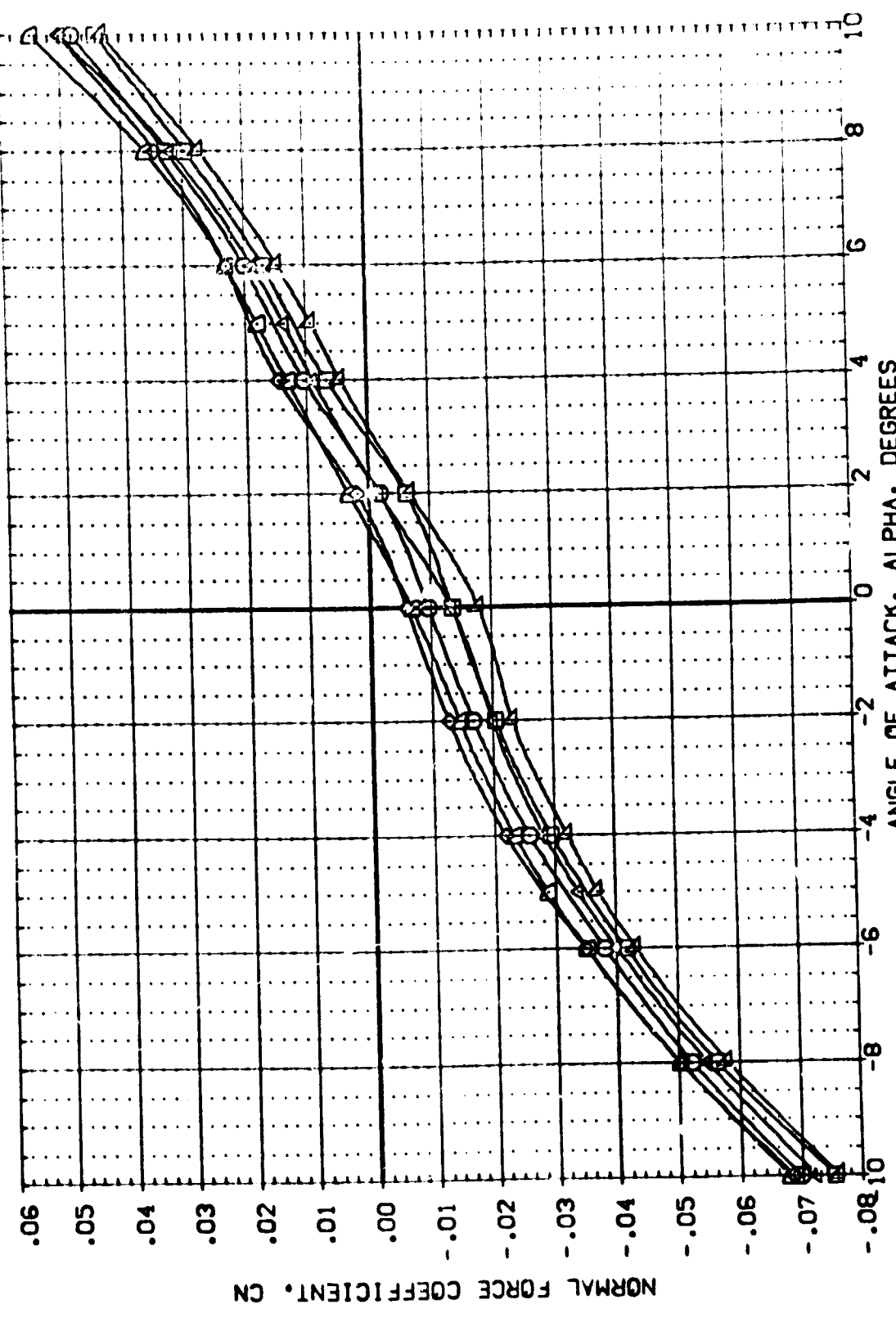
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DRBING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(080541)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)1V1E	.500	9.100	.200	.050	SREF	.9720
(080543)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)1V1E	.500	13.140	.200	.100	LREF	5.3130
(080502)	MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)	.500	.000	.000	.000	BREF	2.5490
						XMRP	.0000
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0010



EFFECT ON SRB OF SPACER GAP - ATTACHED FORE AND AFT TO ET

(A)MACH = 1.25

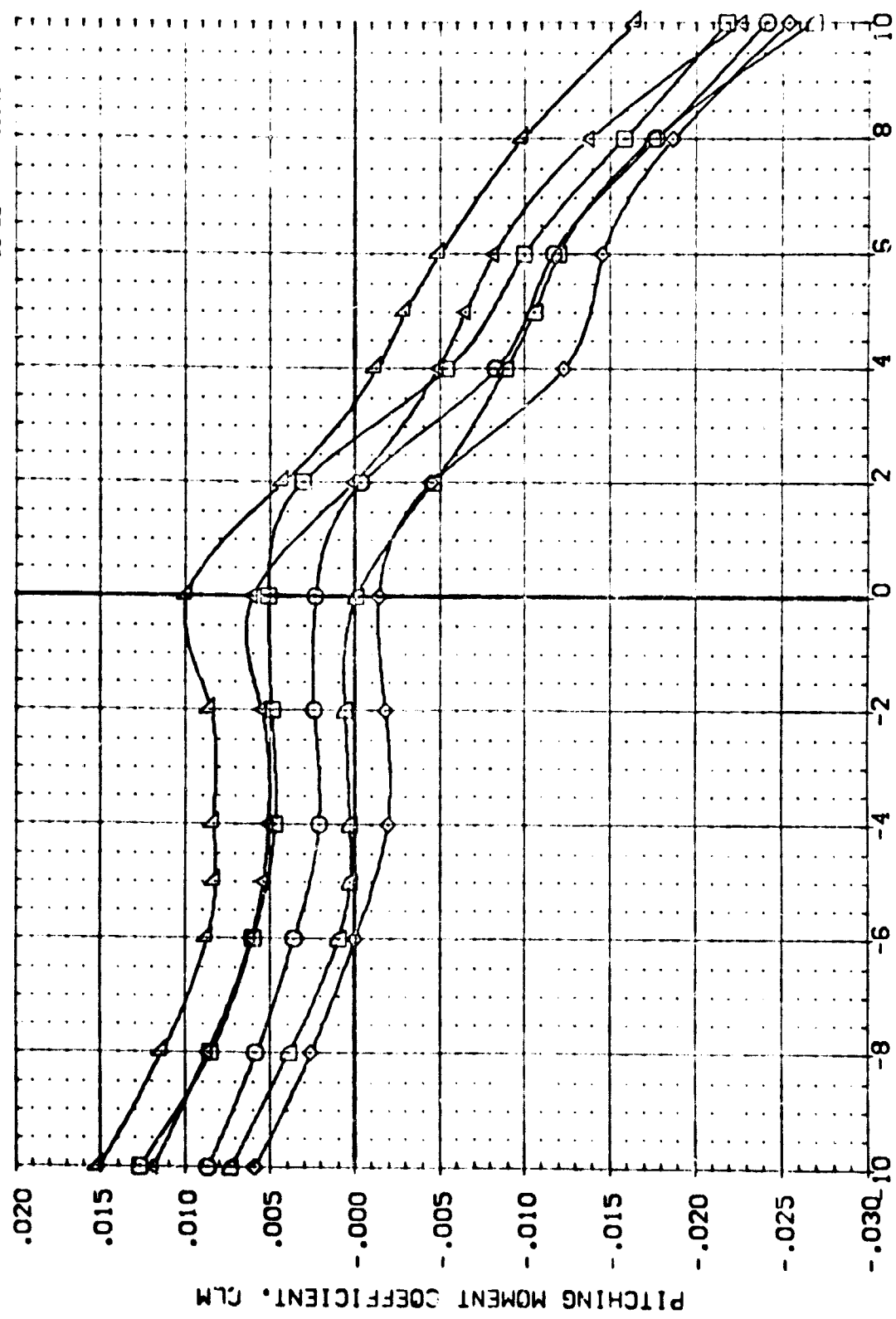
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(000541)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)VIE	.500	.140	.200	.050	SREF .9720
(000544)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)VIE	1.500	.140	.200	.050	LREF .93130
(000545)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)VIE	1.500	.140	.200	.050	BREF .92222
(000502)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)	.500	.140	.000	.000	XMRP .5400
(000503)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)	1.500	.140	.000	.000	YMRP .0000
(000501)	MSFC 5701(A31F)(S3/21)(C3)/(T9)/(S3/2)	1.500	.140	.000	.000	ZMRP .0000
						SCALE .0010



EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

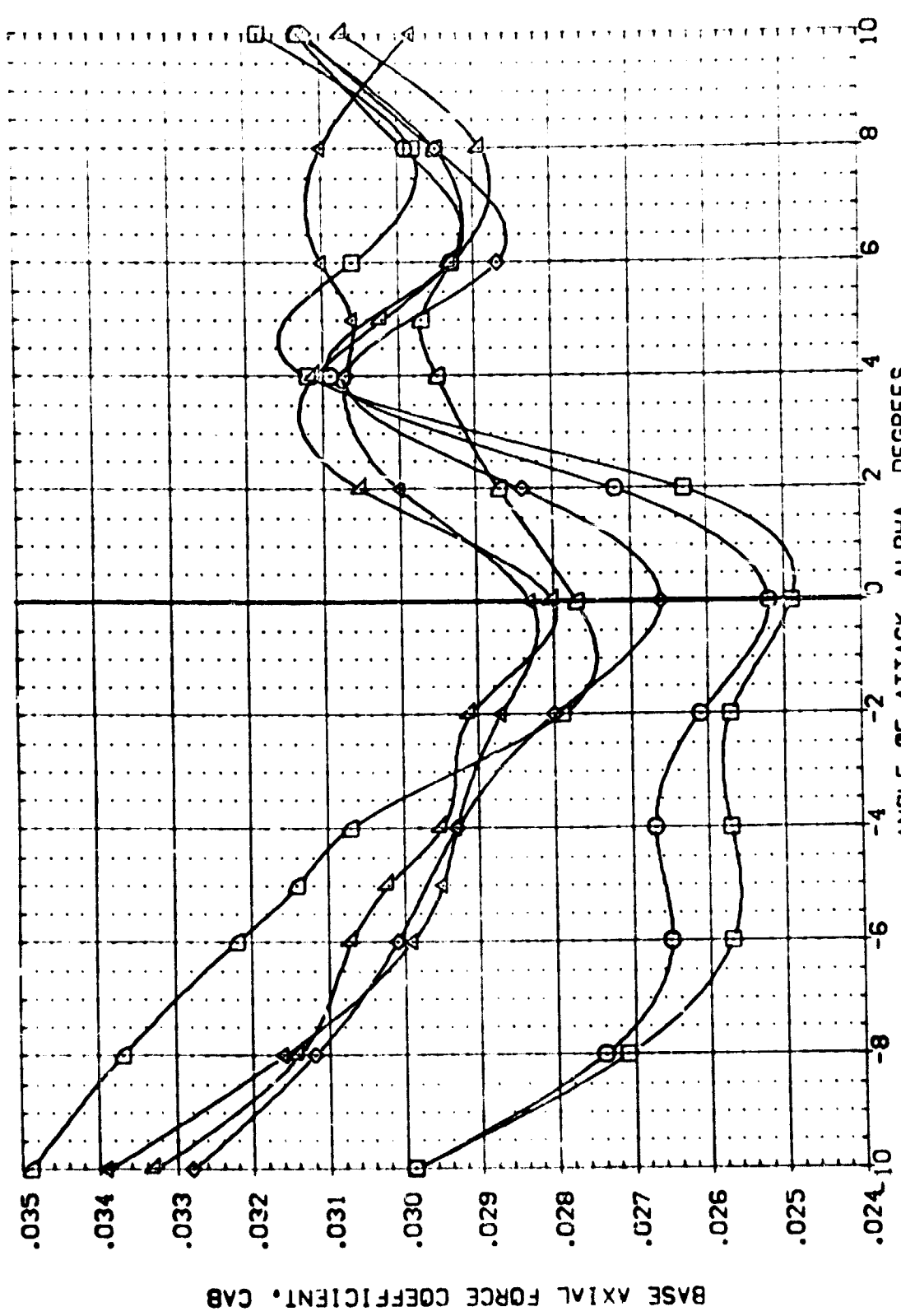
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(00041)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)VE	500	.140	.200	.050	SREF .9720
(00044)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)VE	1500	.140	.200	.050	LREF 5.3120
(00045)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)VE	500	.140	.200	.050	BREF 2.5450
(000502)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	500	.140	.000	.000	XMRP .0000
(000503)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	1500	.140	.000	.000	ZMRP .0000
(000501)	MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)	500	.140	.000	.000	SCALE .0010



EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A) MACH = 1.25

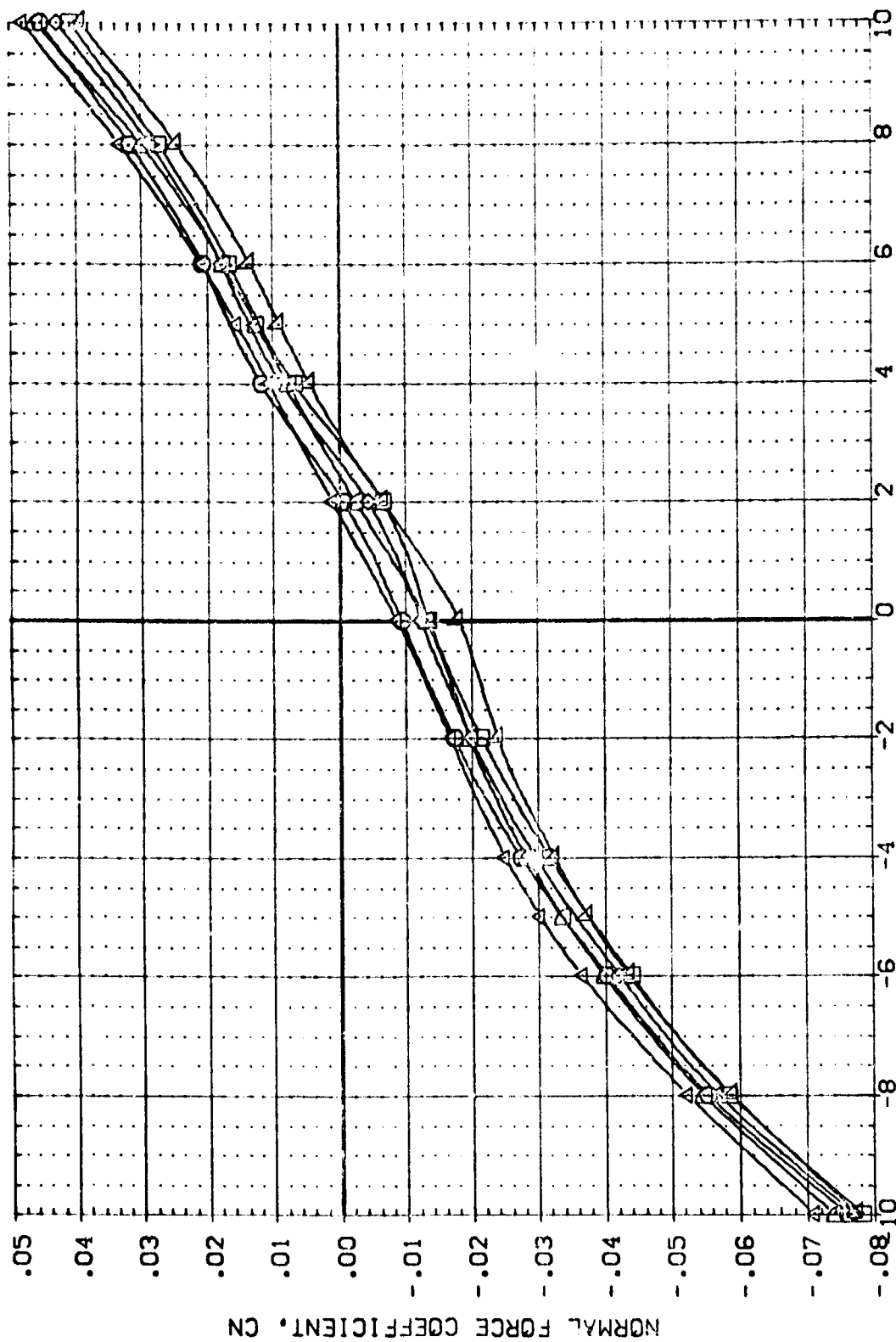
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBIT INC	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION
(00001)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	500	.140	.200	.050	SREF 5720
(00002)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	LREF 53130
(00003)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	BREF 53130
(00004)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	XPRP 25483
(00005)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	YPRP .0000
(00006)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	ZPRP .0000
(00007)	MSFC 5701(A31F)(S3/2)/(03)/(T9)/(S3/2)YIE	1500	.140	.200	.050	SCALE .0010



EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

(A)MACH = 1.25

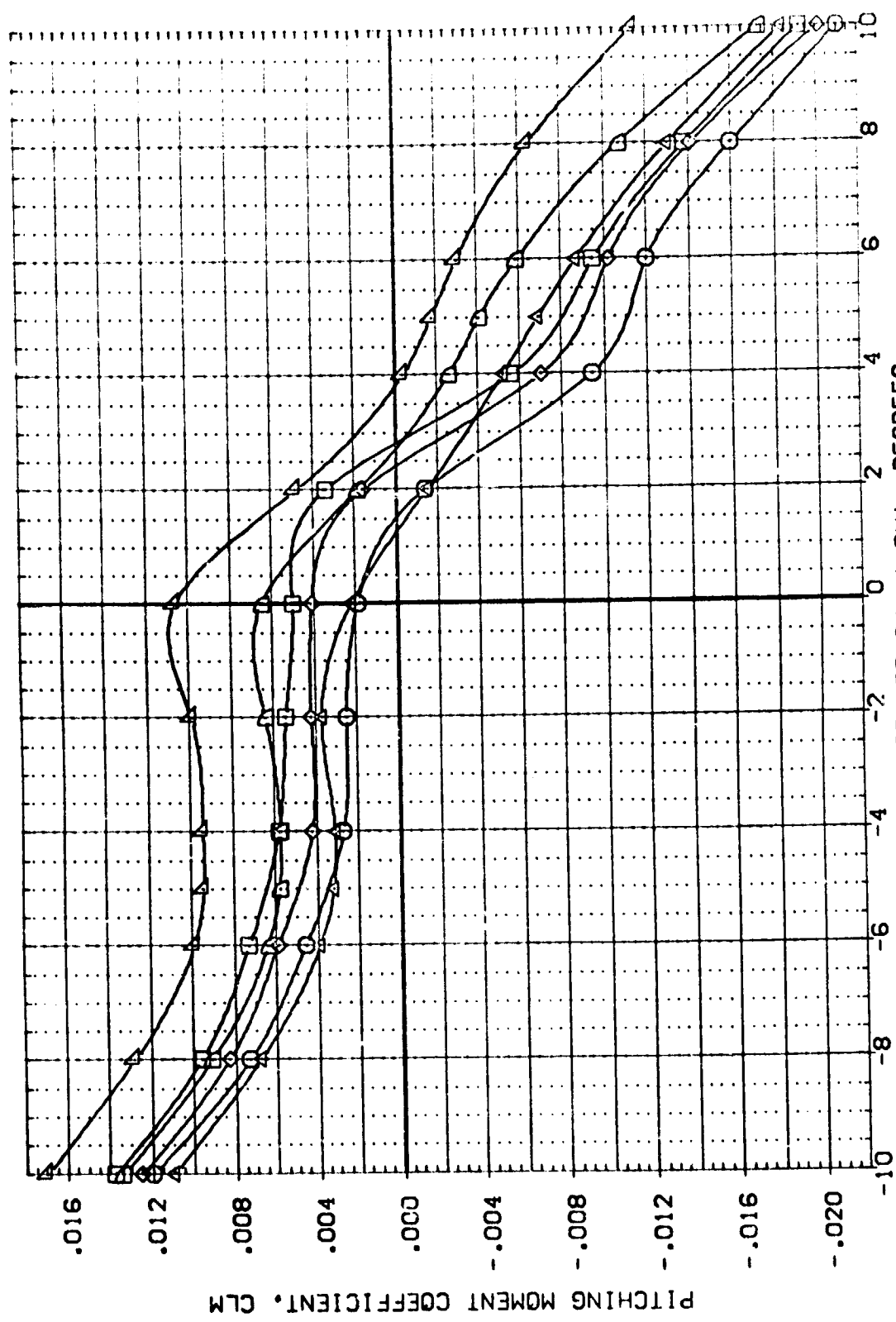
DATA SET SYMB.	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION	IN
(083546)	MSFC 570(IA31F)(S3/2)(C3)/(T9)/(S3/2)YIE	-500	.280	.200	.050	SREF	.9720
(083547)	MSFC 570(IA31F)(S3/2)(C3)/(T9)/(S3/2)YIE	1500	.280	.200	.050	LREF	5.3130
(083548)	MSFC 570(IA31F)(S3/2)(C3)/(T9)/(S3/2)YIE	500	.280	.200	.050	BREF	5.3130
(083504)	MSFC 570(IA31F)(S3/2)(C3)/(T9)/(S3/2)	-500	.280	.000	.000	XPRP	2.5450
(083505)	MSFC 570(IA31F)(S3/2)(C3)/(T9)/(S3/2)	1500	.280	.000	.000	YPRP	.0000
		500	.280	.000	.000	ZPRP	.0000
						SCALE	.0010



EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

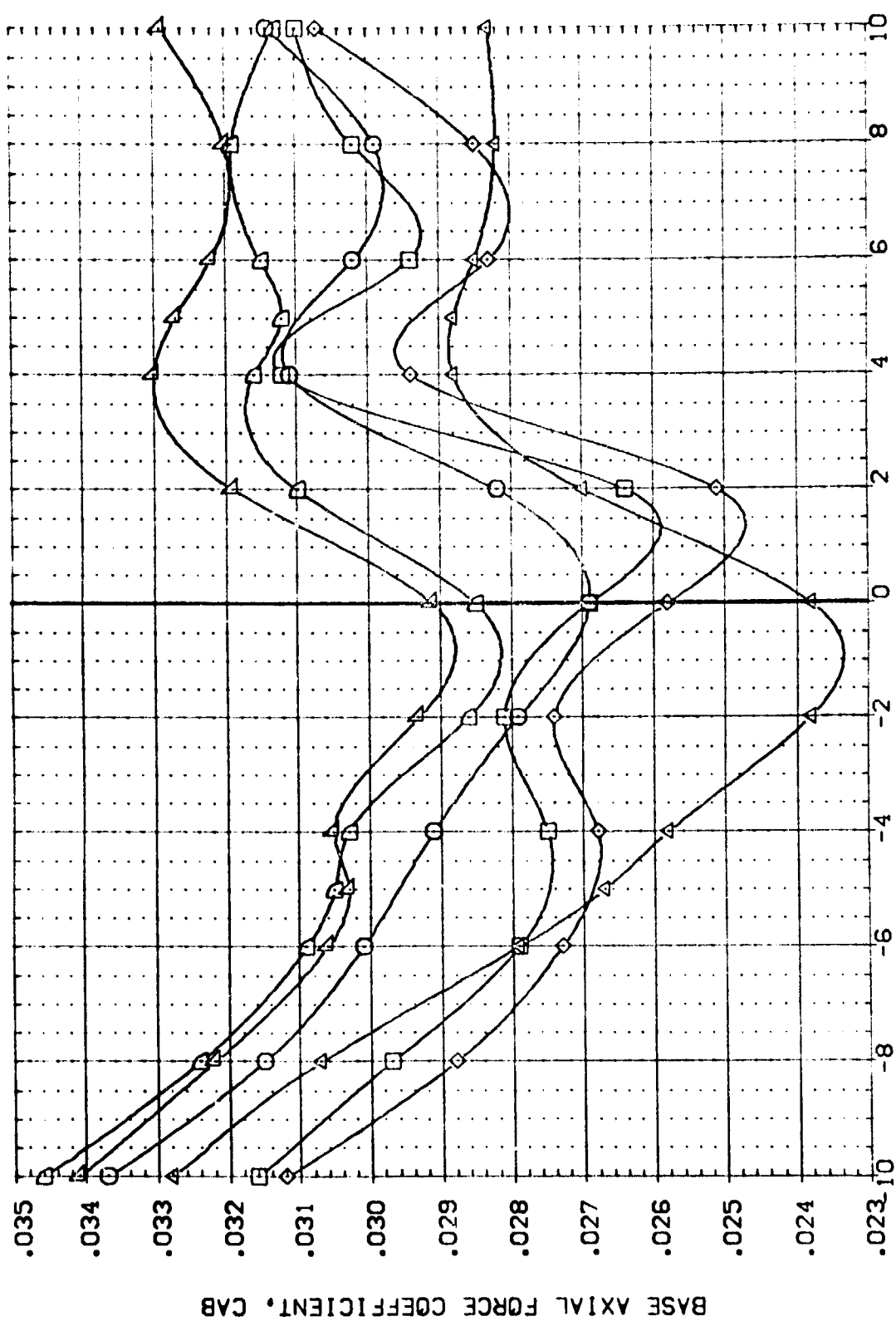
(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION	SCALE
(08346)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	-500	.280	.200	.050	SREF .9720	.0040
(08347)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	1500	.280	.200	.050	LREF 5.3130	
(08348)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	500	.280	.200	.050	BREF 5.3130	
(08349)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	500	.280	.200	.050	XMRP 2.5490	
(08350)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	500	.280	.200	.050	YMRP .0000	
(08351)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	500	.280	.200	.050	ZMRP .0000	
(08352)	MSFC 570(A31F)(S3/2)/(03)/(19)/(S3/2)11E	500	.280	.200	.050	SCALE .0040	



EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION	SCALE
[080546]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	SREF	.9720
[080547]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	LREF	5.3130
[080548]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	BREF	5.3130
[080549]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	YREF	2.5480
[080550]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	ZREF	.0000
[080551]	MSFC 570([A31F])(S3/2)(O31)(T91)(S3/2)Y1E	1.500	.280	.200	.050	SCALE	.0040



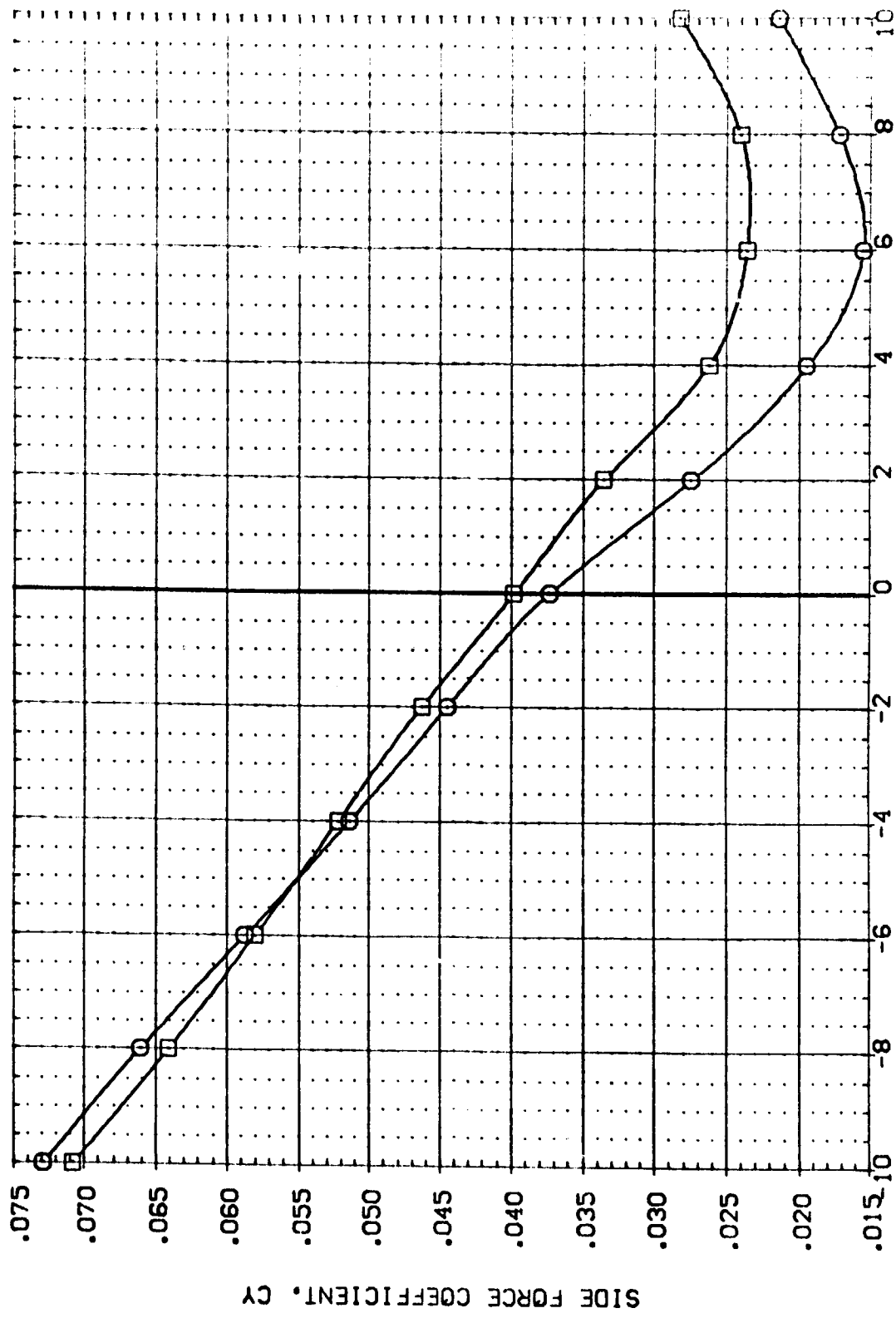
EFFECT ON SRB OF SPACER DIAMETER AT VARIOUS ORBITER INCIDENCE ANGLES

DATA SET SYMBOL: (A83549) (D83507)

CONFIGURATION DESCRIPTION: MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)YIE MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)

ORBITAL: ORBINC .500 SPACER 9.100 SPADIA .200 SPAGAP .050

REFERENCE INFORMATION: SREF .9720 SQ. IN LREF 5.3130 BREF 5.3130 XMRP 2.5450 YMRP .0000 ZMRP .0000 SCALE .0040



SIDESLIP ANGLE, BETA, DEGREES

EFFECT ON SRB OF SPACERS (FORE AND AFT) ATTACHED TO ET

(A)MACH = 1.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

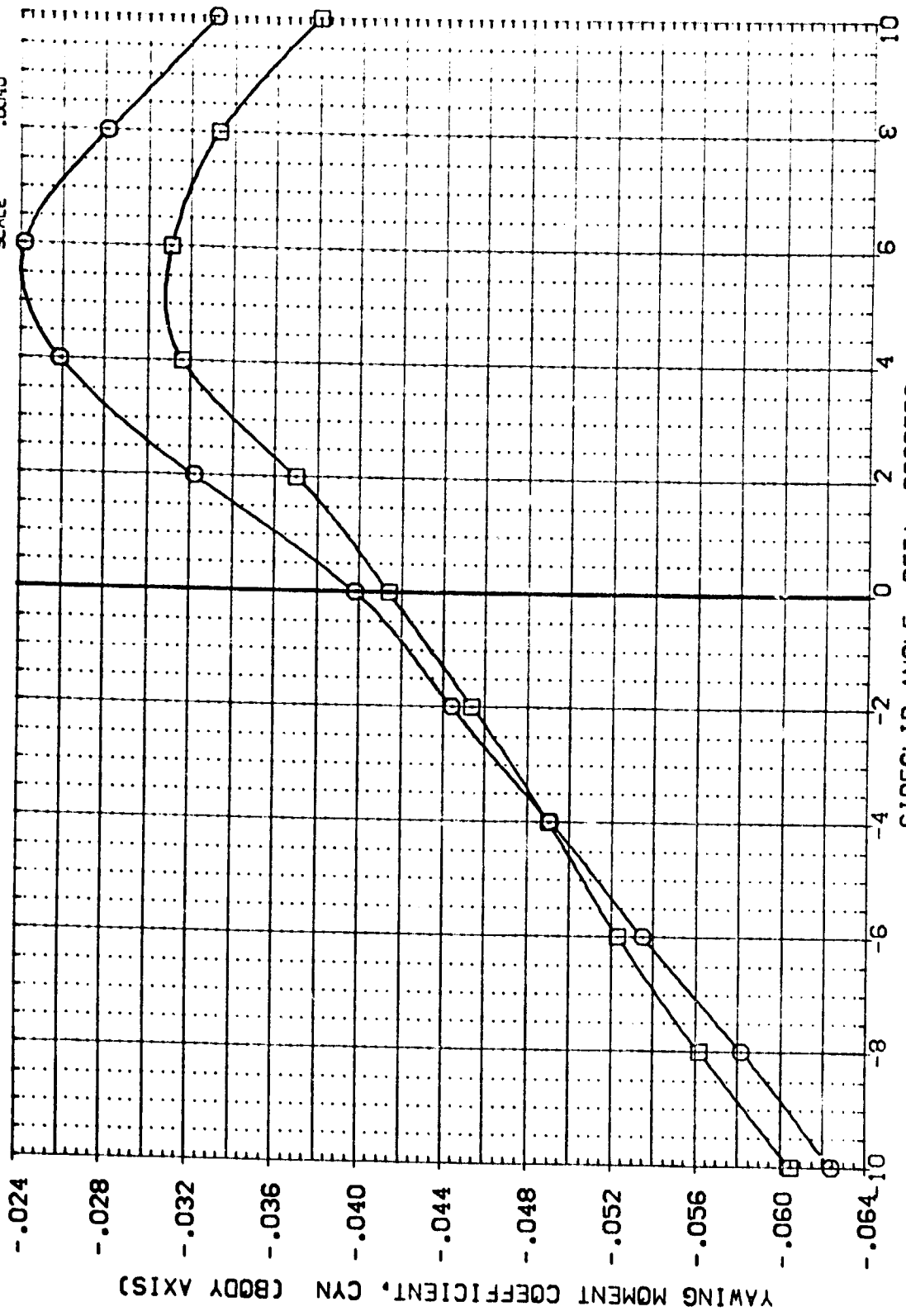
(A83S49) MSFC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)Y1E
 (D83S07) MSFC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)

ORBITING SPACER SPADIA SPAGAP

.500 9.100 .200 .050
 .500 .000 .000 .000

REFERENCE INFORMATION

SREF .9720 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5480 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



SIDESLIP ANGLE, BETA, DEGREES

EFFECT ON SRB OF SPACERS (FORE AND AFT) ATTACHED TO ET

CAMACH = 1.26

DATA SET SYMBOL: (C00541) (C00550)

CONFIGURATION DESCRIPTION:
 MSFC 570(I A31F)(S3/2)/(T9)/(S3/2)V1E
 MSFC 570(I A31F)(S3/2)/(T9)/(S3/2)V1E

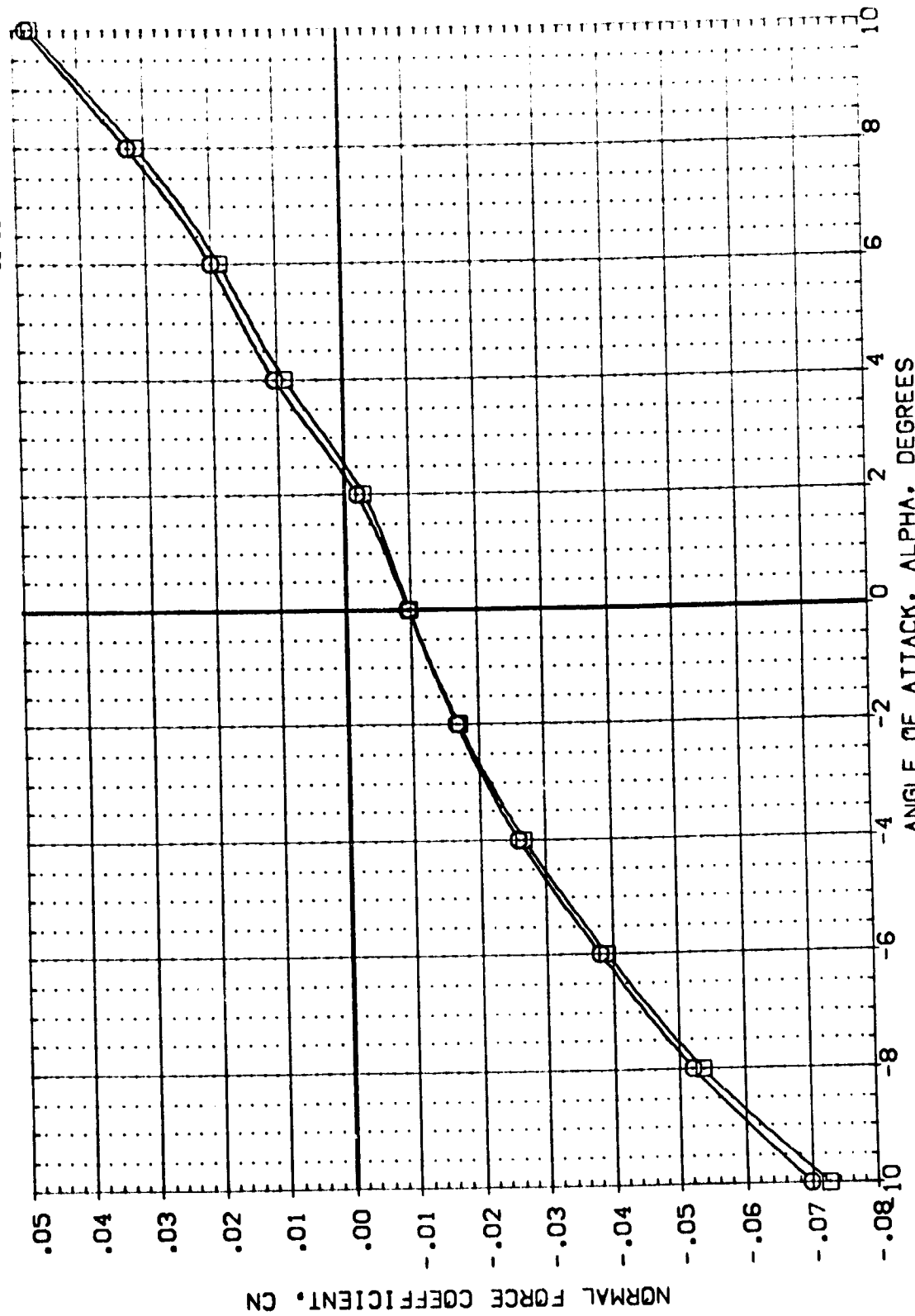
ORBITING: .500 .500

SPACER: 9.100 9.100

SPADIA: .200 .200

SPADAP: .050 .050

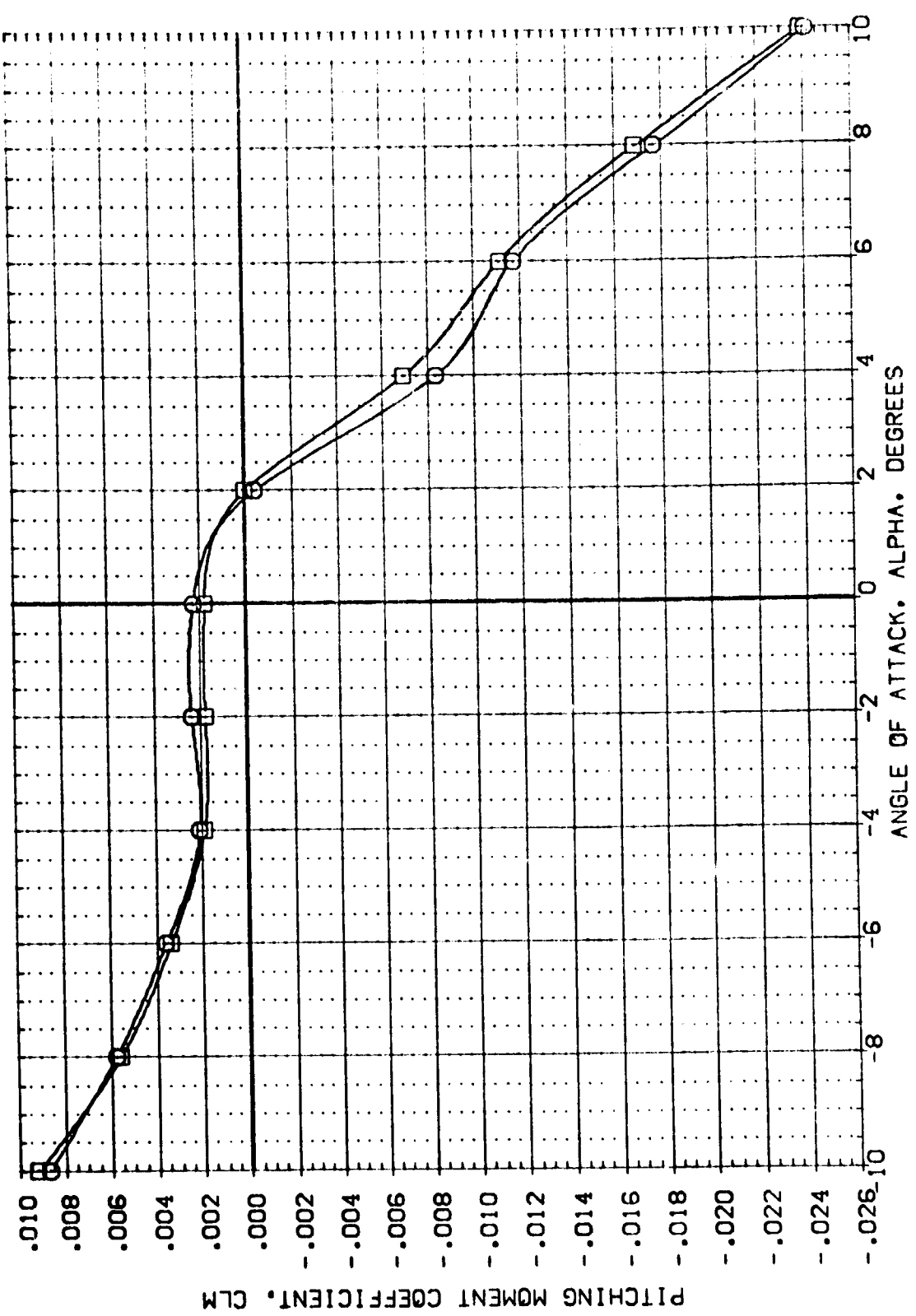
REFERENCE INFORMATION:
 SREF: .9720 SQ. IN
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5450 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0040



EFFECT ON SRB OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(083541)	MSFC 570(1A31F)(S3/21)(03)/(19)/(S3/21)IE	.500	9.100	.200	.050	SREF	9720
(083550)	MSFC 570(1A31F)(S3/21)(03)/(19)/(S3/21)IEG	.500	9.100	.200	.050	LREF	5.3130
						BREF	5.3130
						XMRP	2.5490
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0040



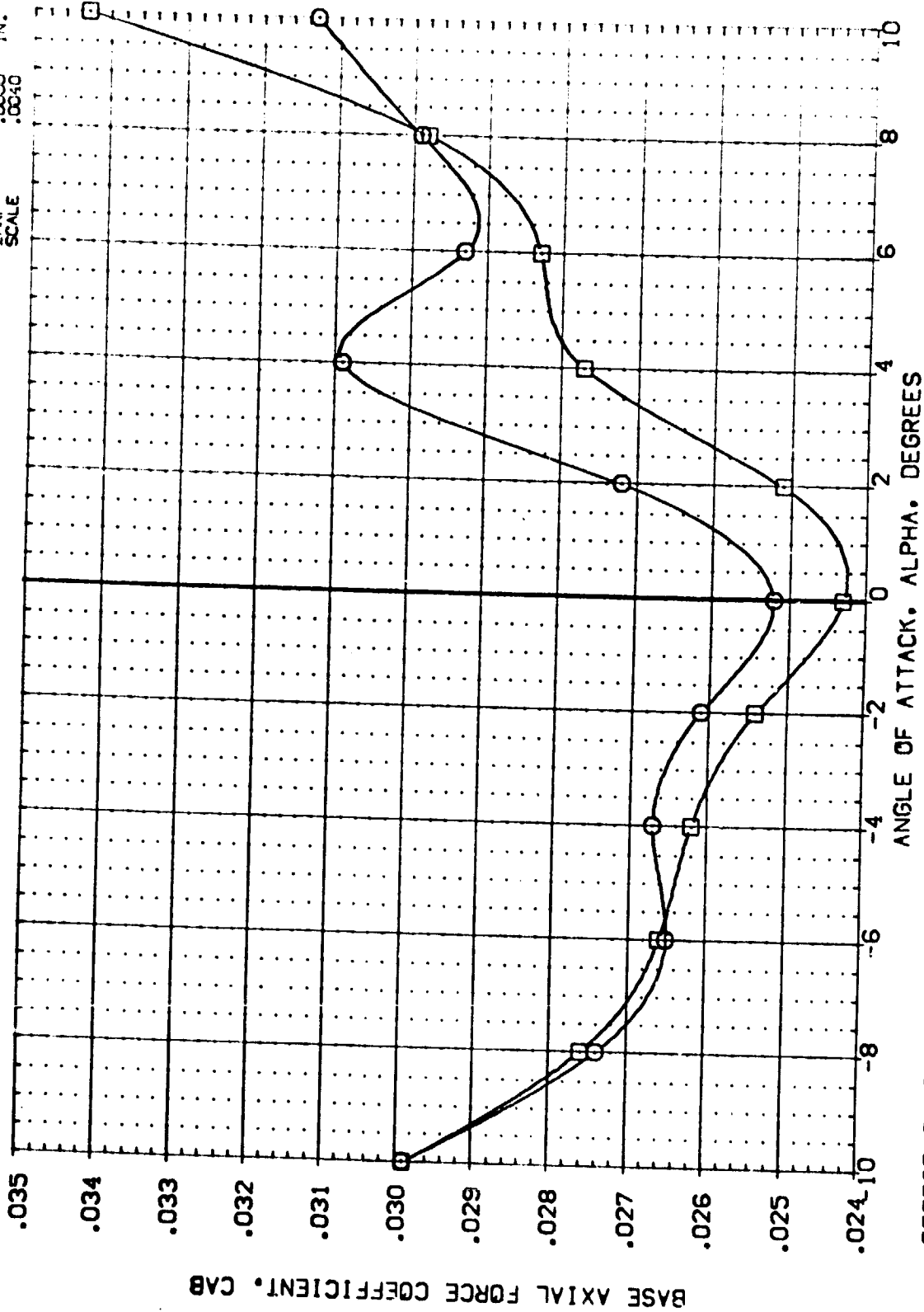
EFFECT ON SRB OF GRIT - SPACERS ATTACHED TO ET

(MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C83541) \square MSFC 570((A31F)(S3/2)/(C3))((T9)/(S3/2))Y1E6
 (C83550) MSFC 570((A31F)(S3/2)/(C3))((T9)/(S3/2))Y1E6

ORBITAL SPACER SPADIA SPAGAP
 .500 .200 .050
 .500 .200 .050

REFERENCE INFORMATION
 SREF .9720 50. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



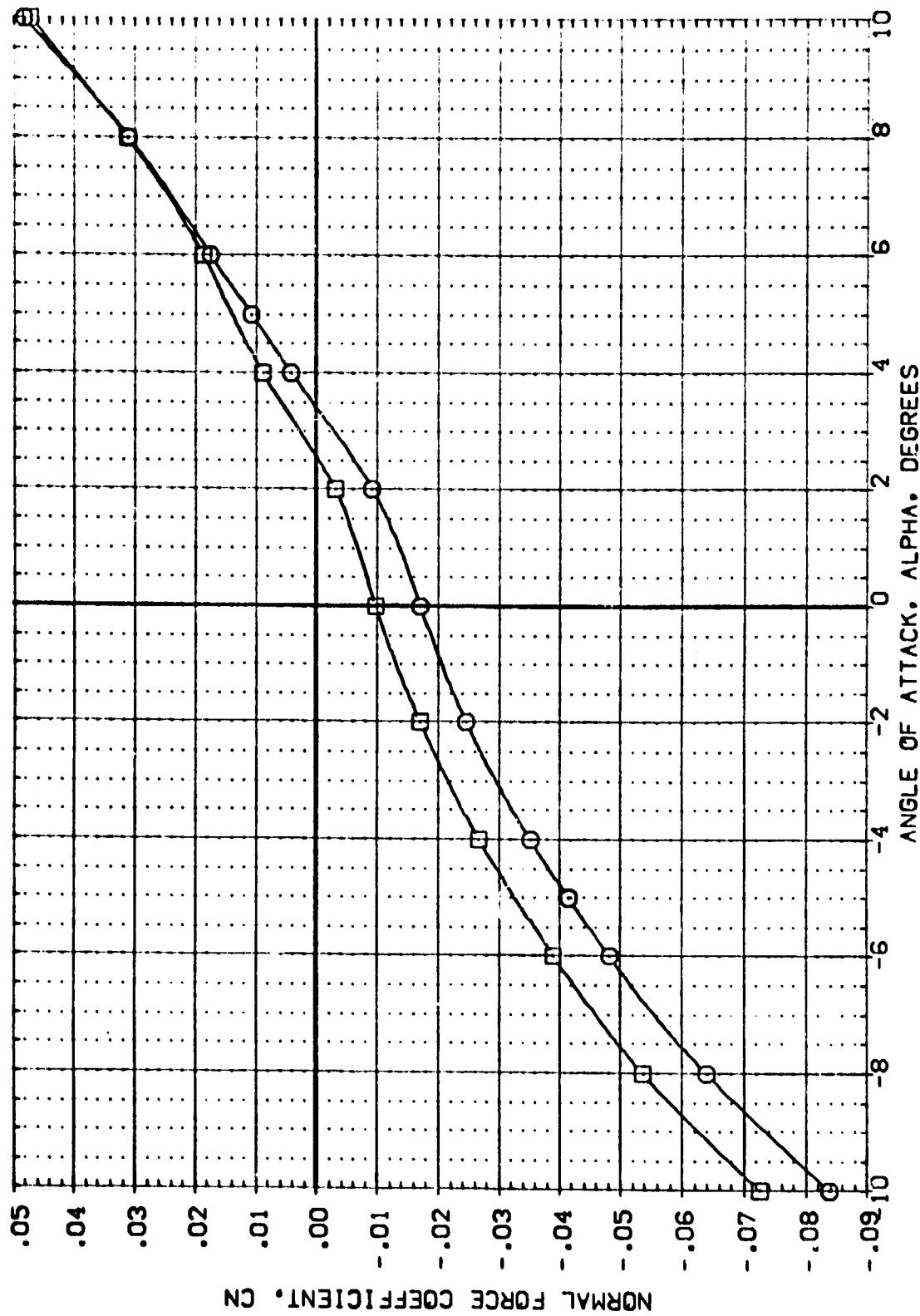
EFFECT ON SRB OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D8G521)	MSFC 570((A3)F((S3/2)/(G3)/(T9)(U5)/(S3/2)
(D8G550)	MSFC 570((A3)F((S3/2)/(G3)/(T9)/(S3/2)Y)EG

ORRINC	SPACER	SPADIA	SPAGAP
.500	.000	.000	.000
.500	9.100	.200	.050

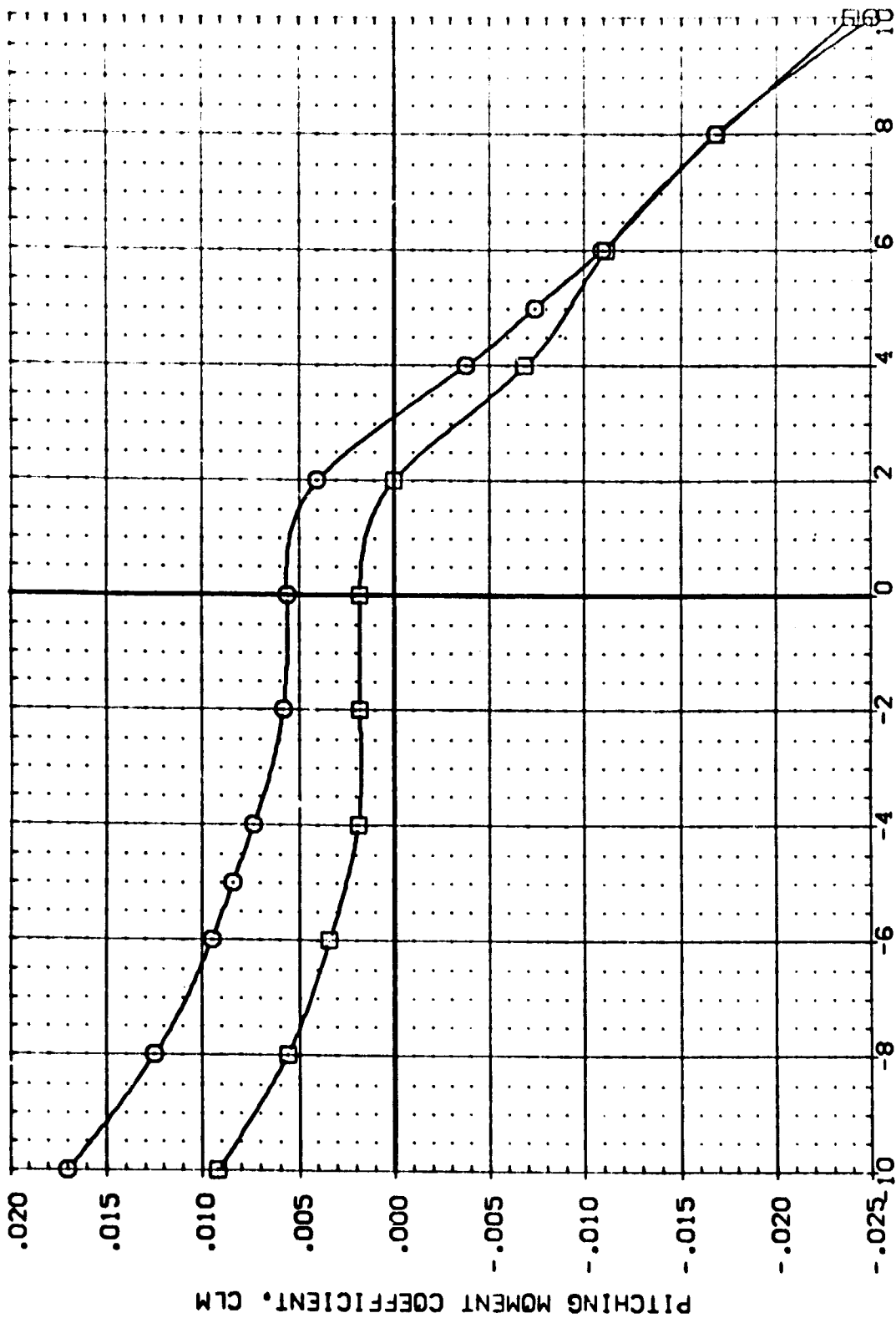
REFERENCE INFORMATION		SO	IN
SREF		.9720	N.
LREF		5.3130	N.
BREF		5.3130	N.
XMRP		2.5490	N.
YMRP		.0000	N.
ZMRP		.0000	N.
SCALE		.0000	N.



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (D0521) MSFC 570(IA31F)(S3/2)/(O3)/(T9)(U5)/(S3/2)
 (C0550) MSFC 570(IA31F)(S3/2)/(O3)/(T9)/(S3/2)YIEB

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 9.100 .050

REFERENCE INFORMATION
 SREF .9720 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



EFFECT ON SRB OF GRIT - SPACERS ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBO. CONFIGURATION DESCRIPTION

(080821) ☐ MSFC 570((A31F)(S3/2)/(03)/(T9)(U5)/(S3/2)

(080830) ☐ MSFC 570((A31F)(S3/2)/(03)/(T9)/(S3/2)Y1EG

ORBITING SPACER SPADIA SPAGAP REFERENCE INFORMATION

.500 .000 .000 SREF .9720 SQ. IN

.500 .000 .000 LREF 5.3130

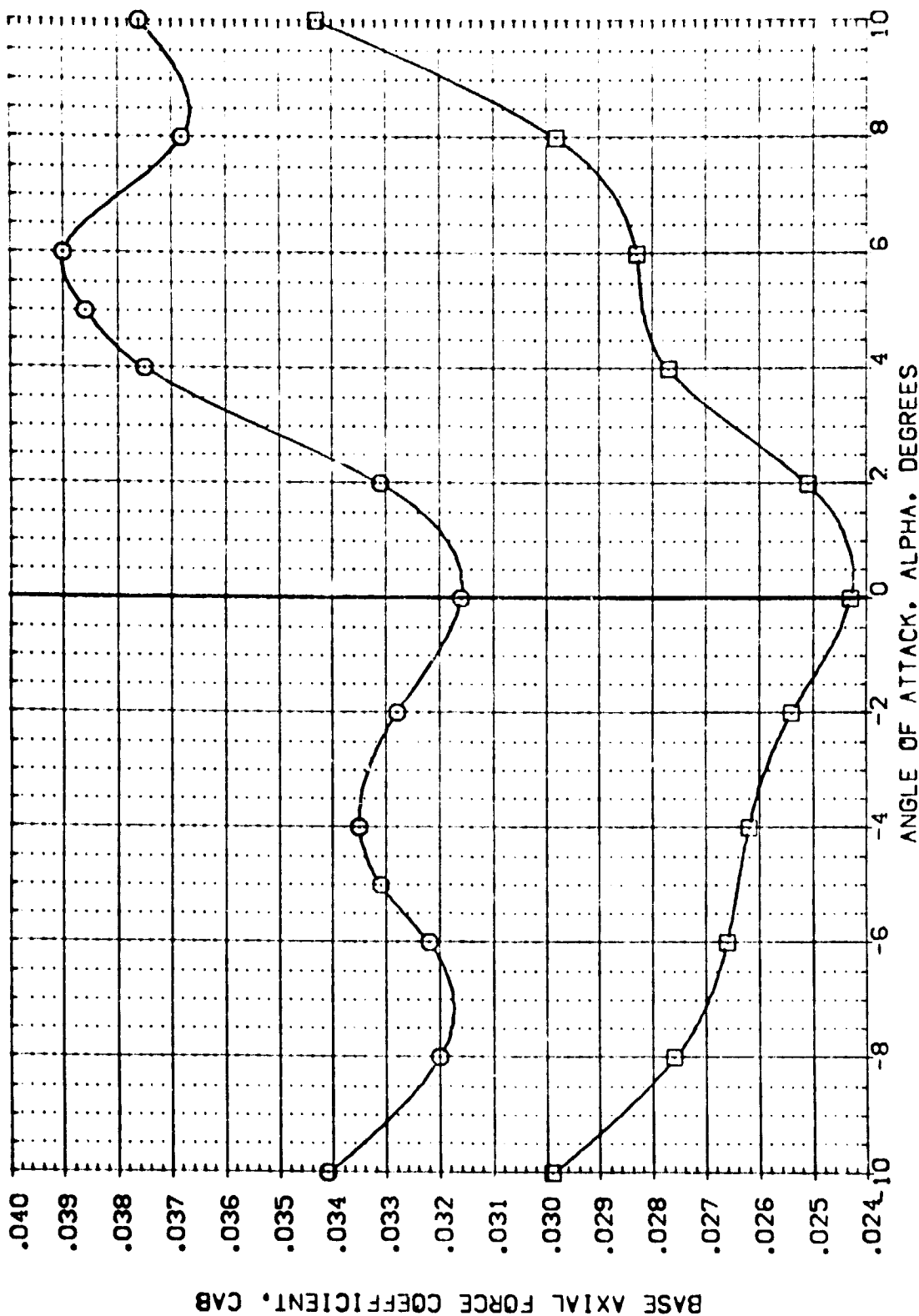
.000 .200 .050 BREF 5.3130

.000 .000 .000 XMRP 2.5450

.000 .000 .000 YMRP .0000

.000 .000 .000 ZMRP .0000

.000 .000 .000 SCALE .0010



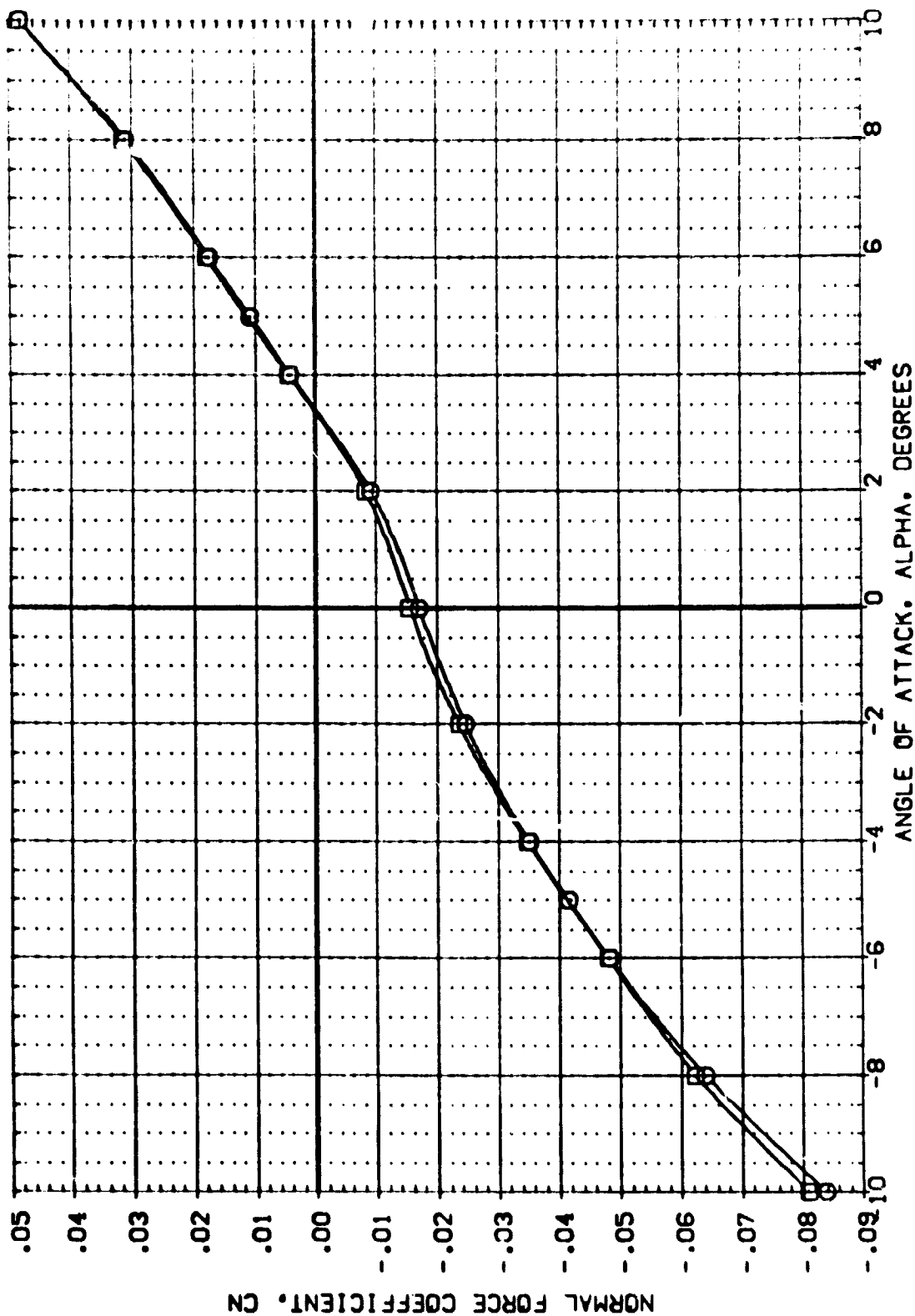
EFFECT ON SRB OF GRIT - SPACERS ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL: **B** CONFIGURATION DESCRIPTION: **MSFC 5701(A31F)(S3/2)/(T9)(U5)/(S3/2)Y2E**
(080821) **(080556)**

ORIGIN: **500** SPACER: **0.000** SPADIA: **0.000** SPAGAP: **0.000**
500 **0.000** **0.200** **0.050**

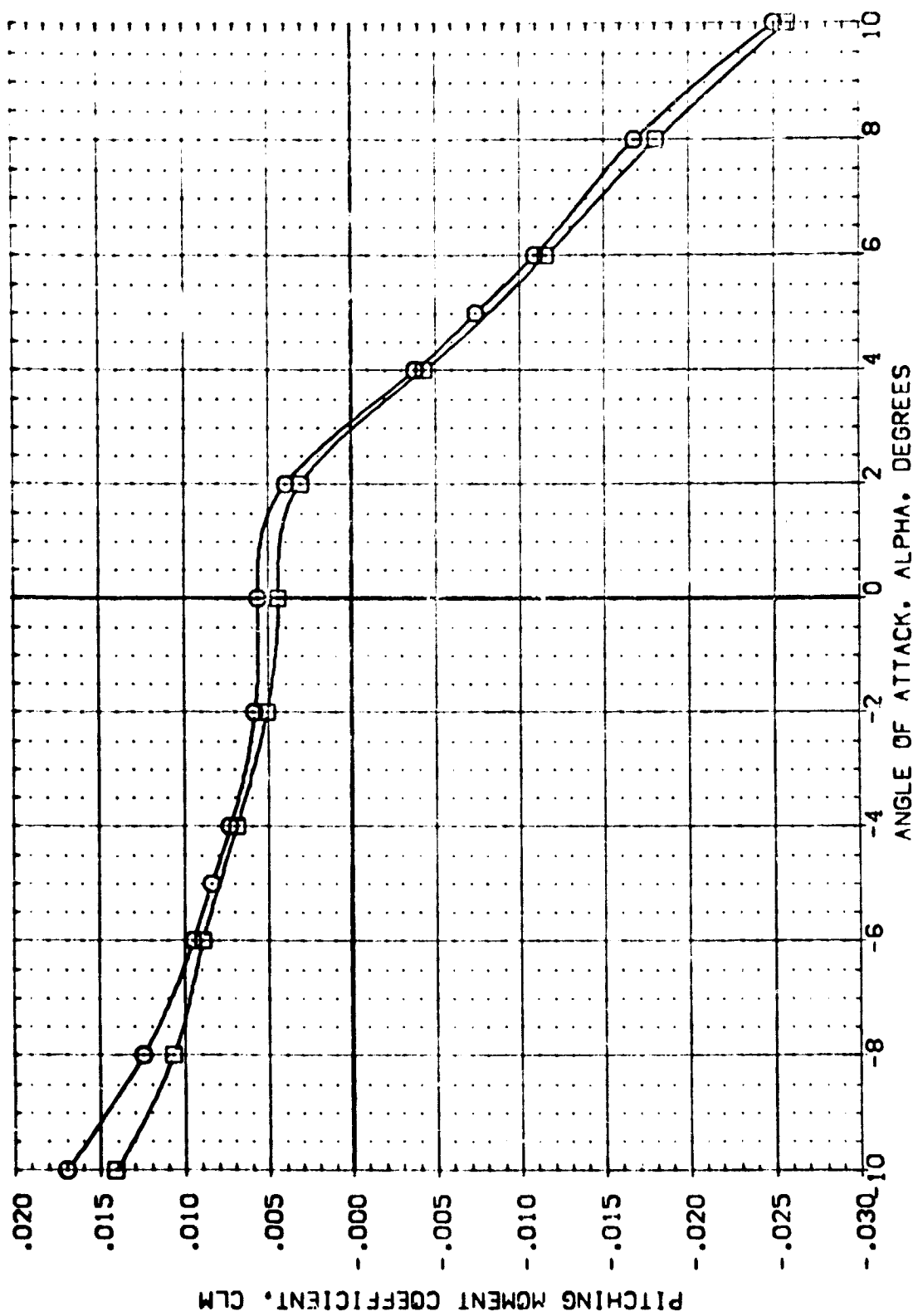
REFERENCE INFORMATION:
 SREF: **9720** SQ: **222222**
 LREF: **53130**
 BREF: **53130**
 XPRP: **2.5480**
 YPRP: **0.0000**
 ZPRP: **0.0000**
 SCALE: **0.0010**



EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITING	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION
(080521)	MBFC 570((A31F)(S3/2)/(O3)/(T9)(U5)/(S3/2))	.500	.000	.000	.000	SREF .9720 30. IN
(080556)	MBFC 570((A31F)(S3/2)/(O3)/(T9)(U5)/(S3/2))	.500	.000	.200	.050	LREF 5.3130 30. IN
						BREF 5.3130 30. IN
						XMRP 2.5480 30. IN
						YMRP .0000 30. IN
						ZMRP .0000 30. IN
						SCALE .0010



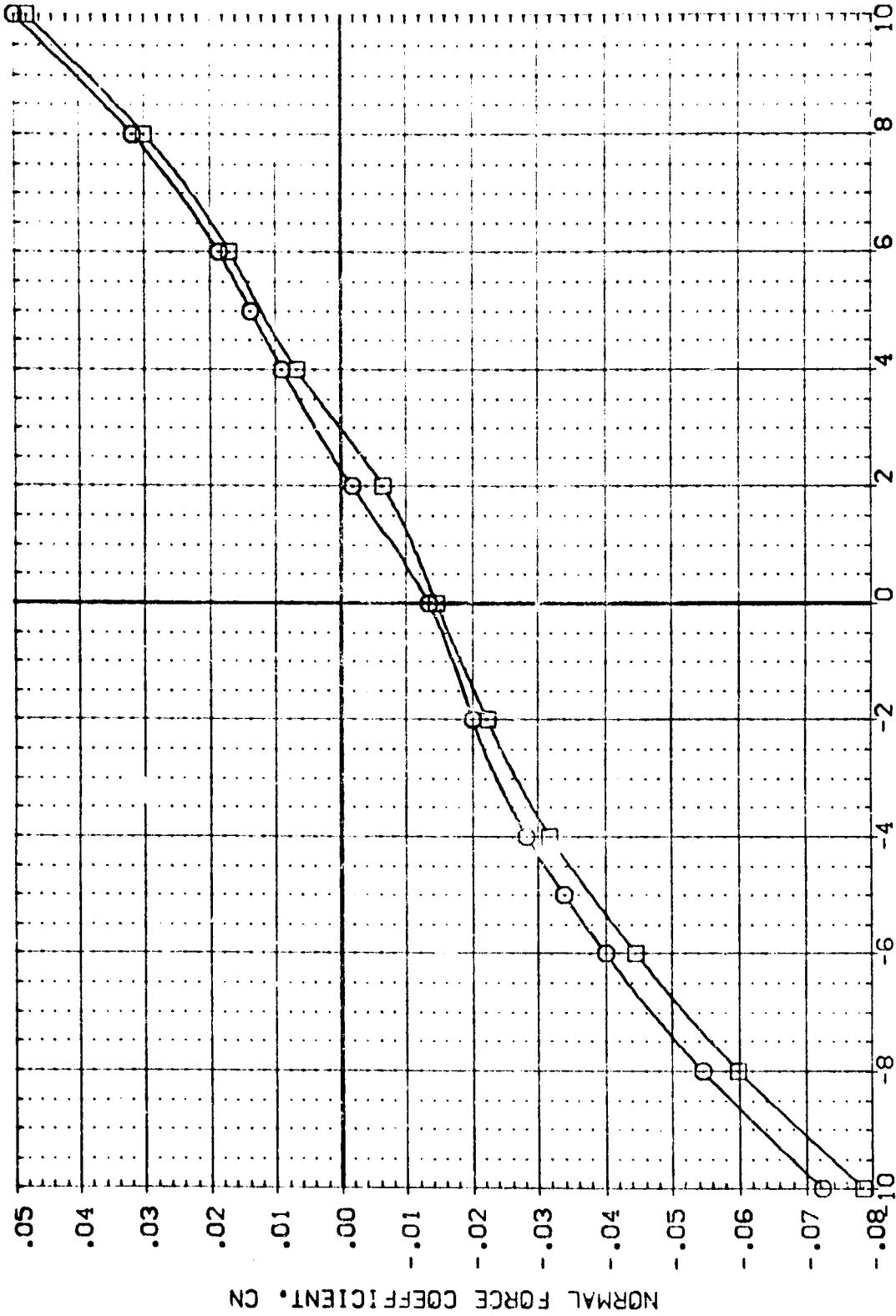
EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO ET

(A) MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (DBG502) □ MSFC 570(IA3)F(S3/2)/(03)/(19)/(S3/2)
 (DBG51) □ MSFC 570(IA3)F(S3/2)/(03)/(19)/(S3/2)3E

ORBITING SPACER SPADIA SPADAP
 .500 .000 .000 .000
 .500 .100 .200 .050

REFERENCE INFORMATION
 SREF 5720
 LREF 53130
 BREF 53130
 XMRP 2.5450
 YMRP .0000
 ZMRP .0000
 SCALE .0040



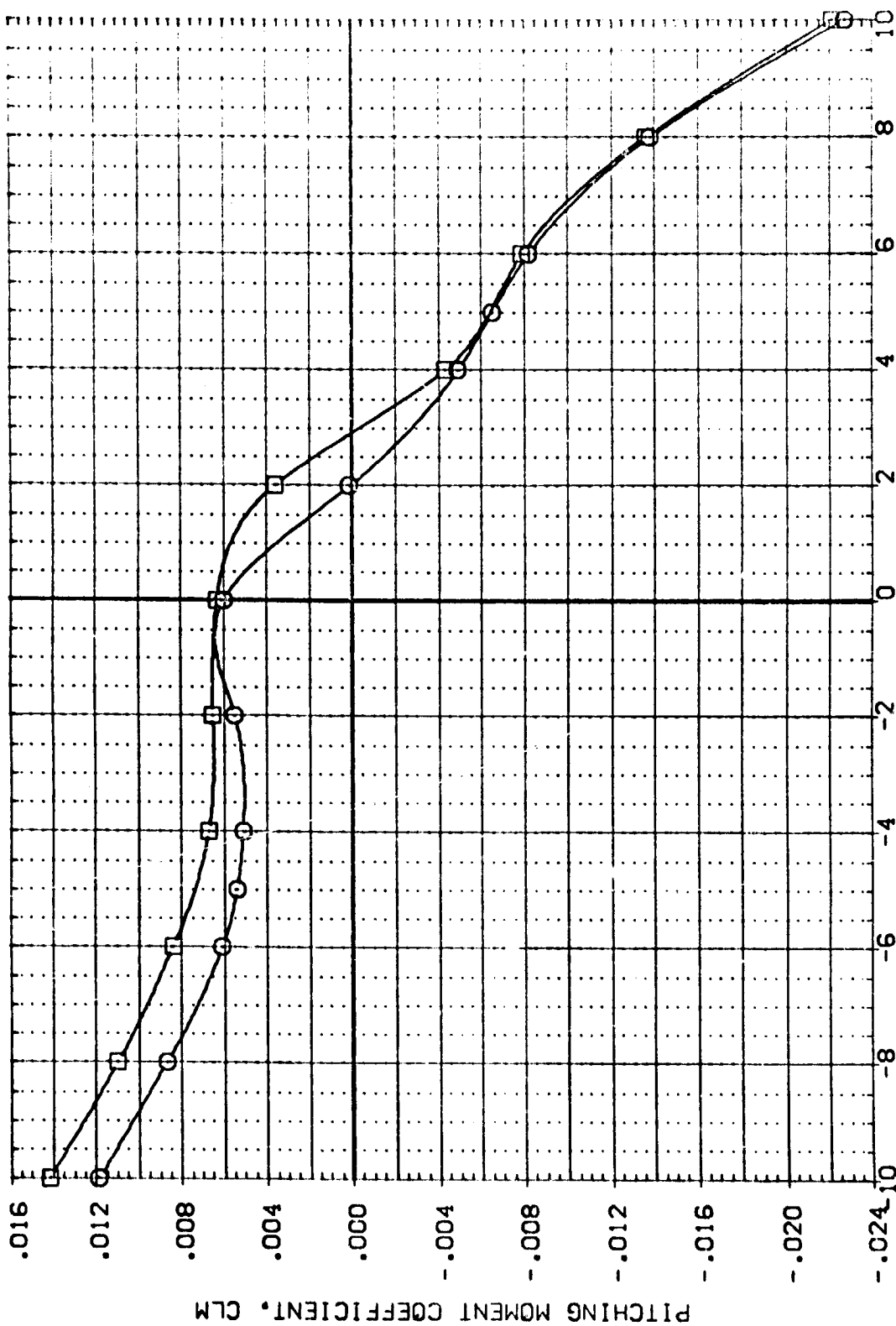
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083502) □ HSC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)
 (083501) □ HSC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)3E

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000 .050
 .500 .100 .200 .050

REFERENCE INFORMATION
 SREF .9720 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



ANGLE OF ATTACK, ALPHA, DEGREES

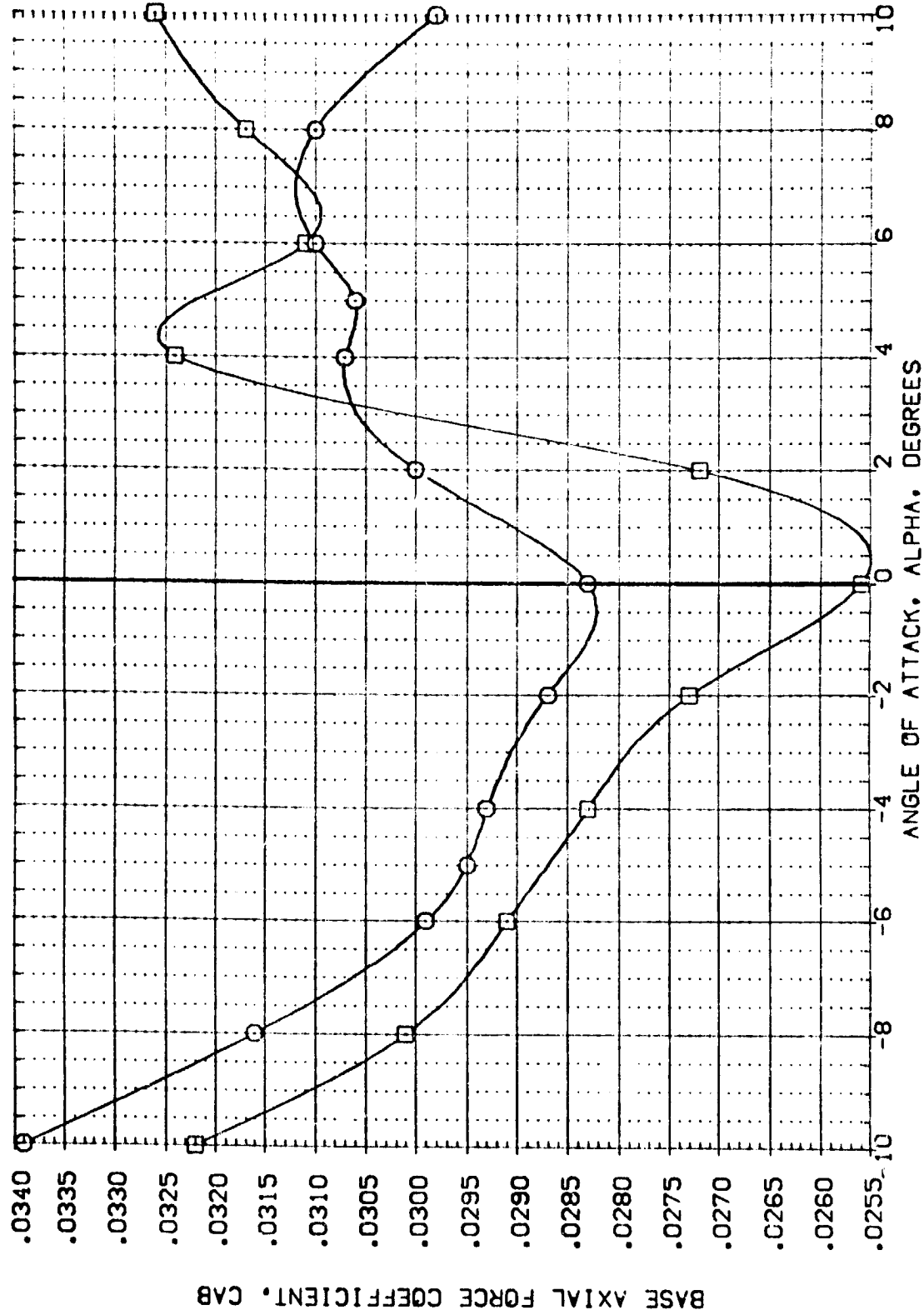
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO ET

(A)MACH = 1.25

DATA SET SYMBOL: (083502) (083551)
 CONFIGURATION DESCRIPTION:
 MSFC 570((1A31F)(S3/2)/((03)/((19)/(S3/2)))
 MSFC 570((1A31F)(S3/2)/((03)/((19)/(S3/2)))

ORBITAL: .500 .500
 SPACER: .000 .100
 SPADIA: .000 .200
 SPAGAP: .000 .050

REFERENCE INFORMATION:
 SREF: 5720
 LREF: 5:3130
 BREF: 5:3130
 XMRP: 2:5450
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0040



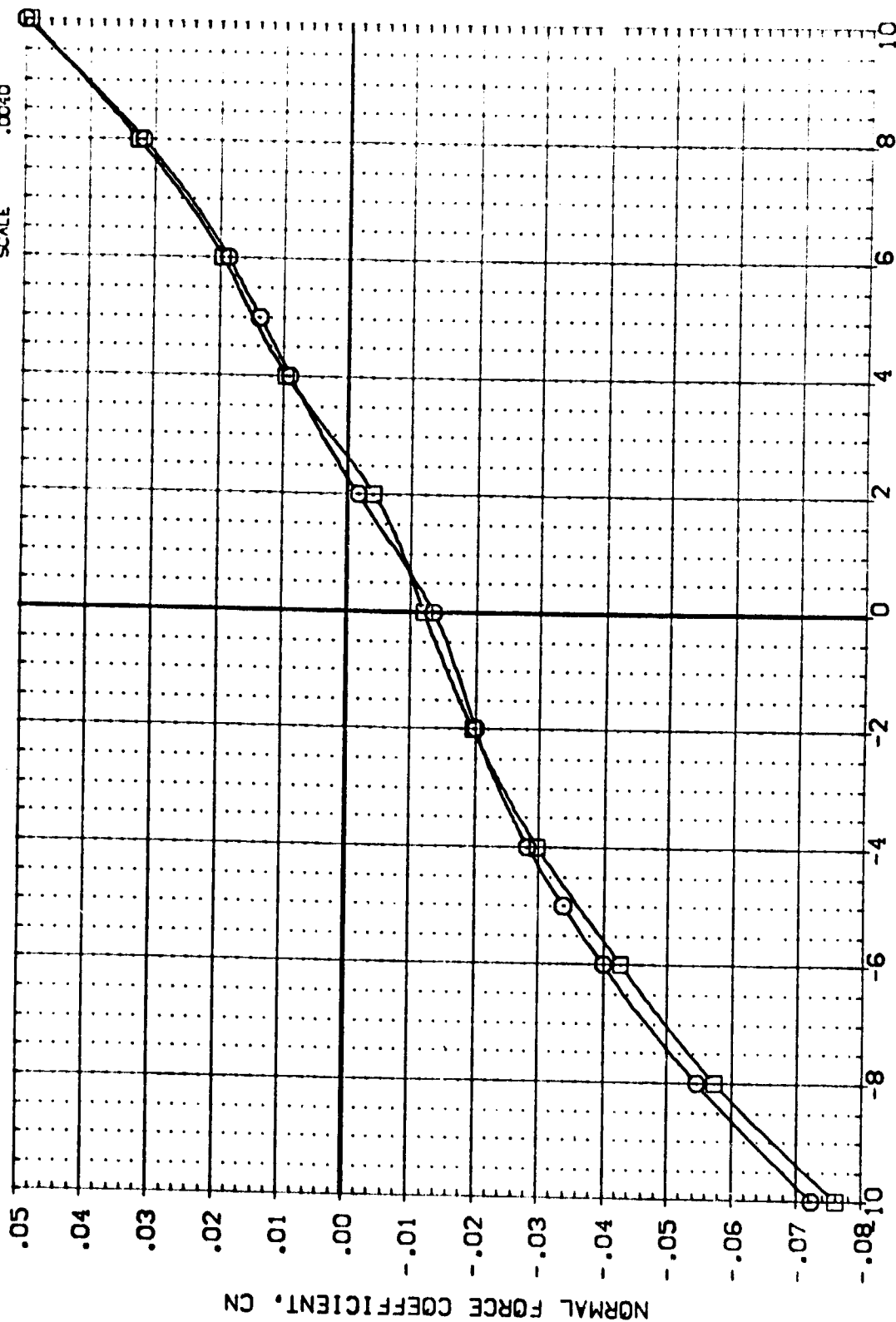
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO ET

(M)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (DBCS02) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)
 (DBCS02) MSFC 570(IA3IF)(S3/2)/(03)/(T9)/(S3/2)V10

ORBITAL ORIGIN SPACER SPADIA SPADAP
 :500 :500 :000 :000
 :500 :21.220 :000 :050

REFERENCE INFORMATION
 SREF .9720 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5480 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010

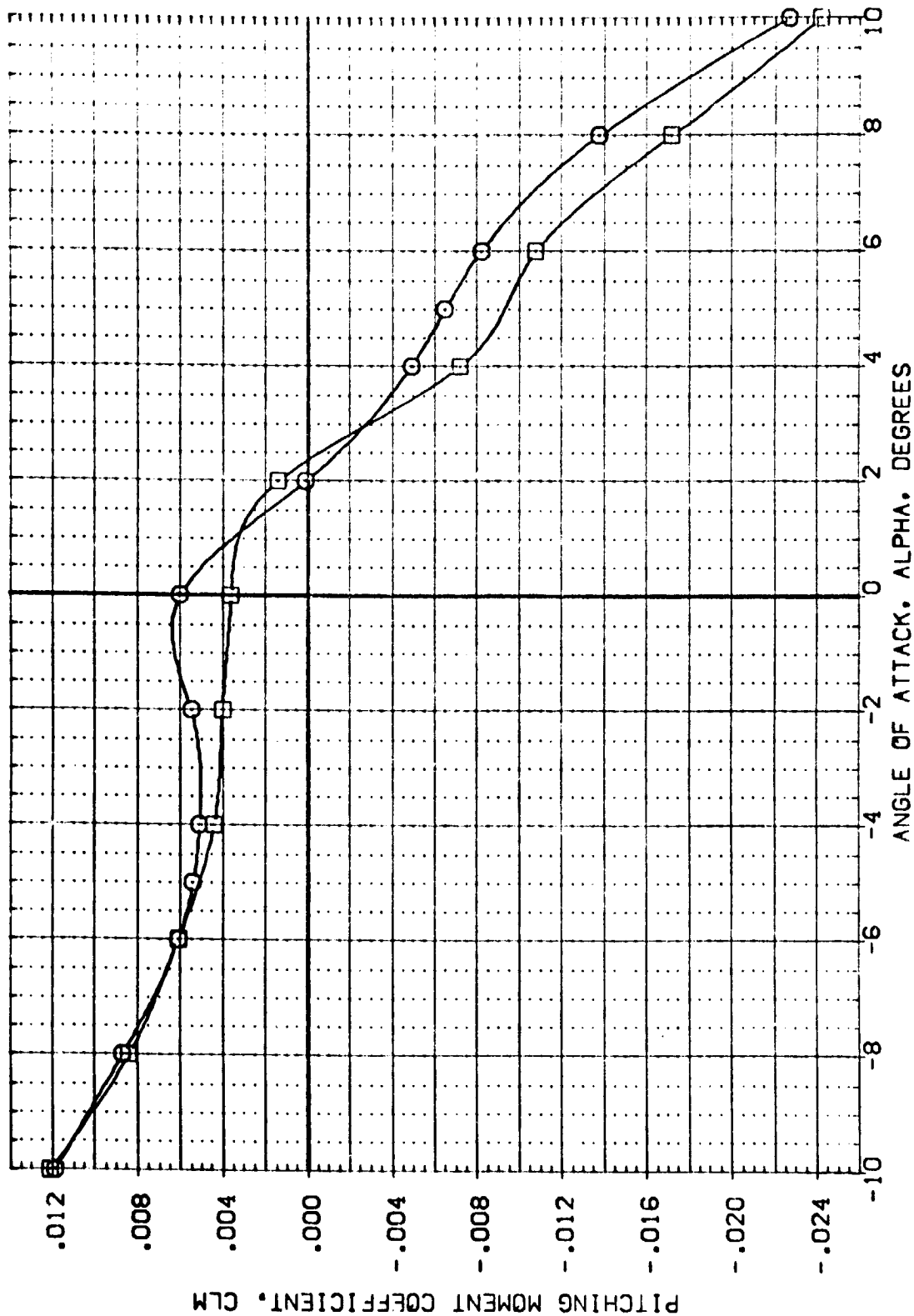


ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON SRB OF SPACERS (FORE AND AFT) ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(083502)	MSFC 570((1A31F)(S3/2)/(03)/(19)/(S3/2))	.500	.000	.000	.000	SREF	9720
(083552)	MSFC 570((1A31F)(S3/2)/(03)/(19)/(S3/2))Y10	.500	21.220	.200	.050	LREF	5.3130
						BREF	5.3130
						XMRP	2.5490
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0040



EFFECT ON SRB OF SPACERS (FORE AND AFT) ATTACHED TO 03

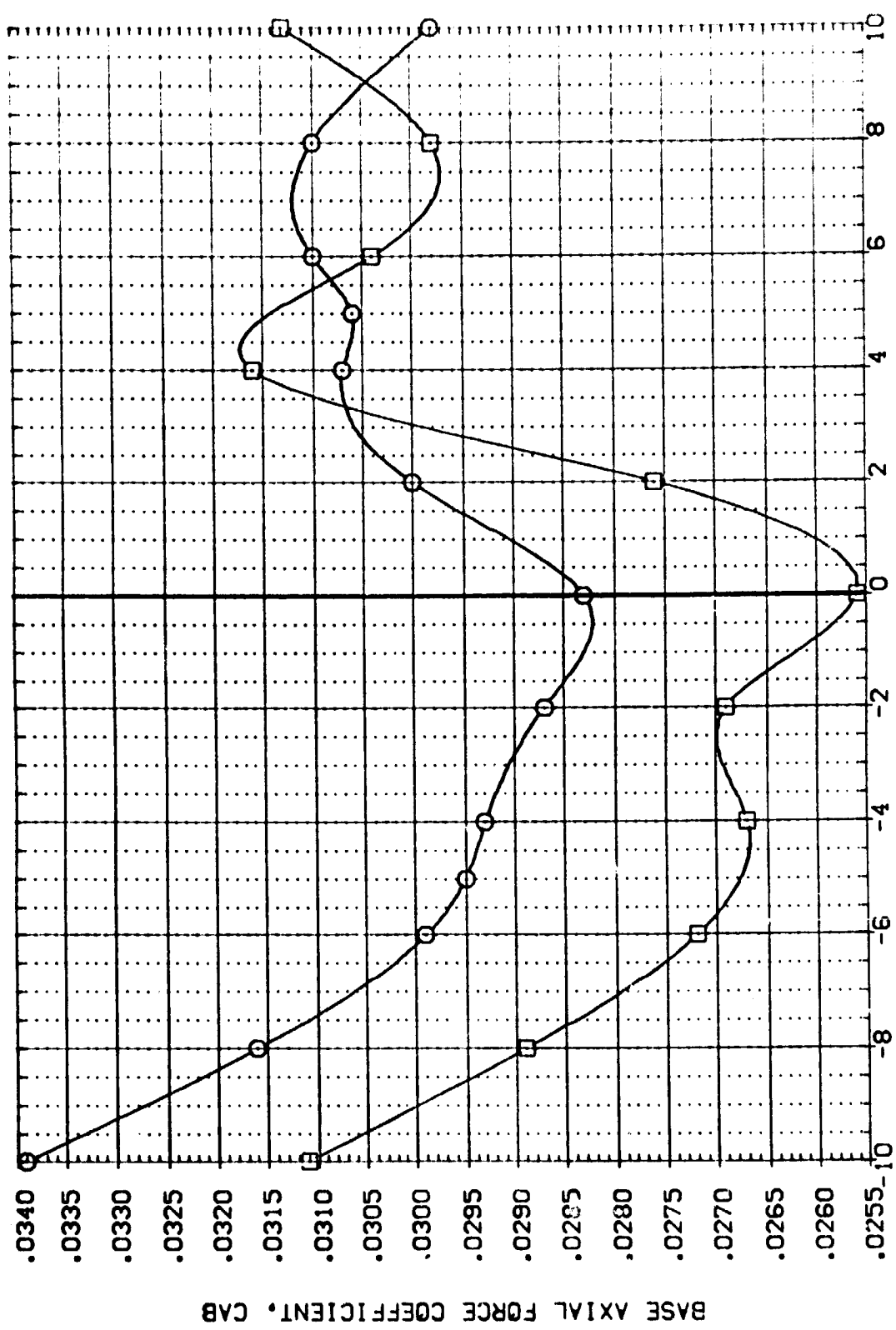
(A)MACH = 1.25

DATA SET SYMBOL: (083502) (083552) □

CONFIGURATION DESCRIPTION: MSFC 570(1A31F)(S3/21)/(03)/(19)/(S3/2) MSFC 570(1A31F)(S3/21)/(03)/(19)/(S3/2) V10

ORBITAL: ORBINC .500 SPACER .000 SPADIA .000 SPAGAP .000

REFERENCE INFORMATION: SREF .5720 SQ. IN. LREF 5.3130 IN. BREF 5.3130 IN. XMRP 2.5490 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE .0040

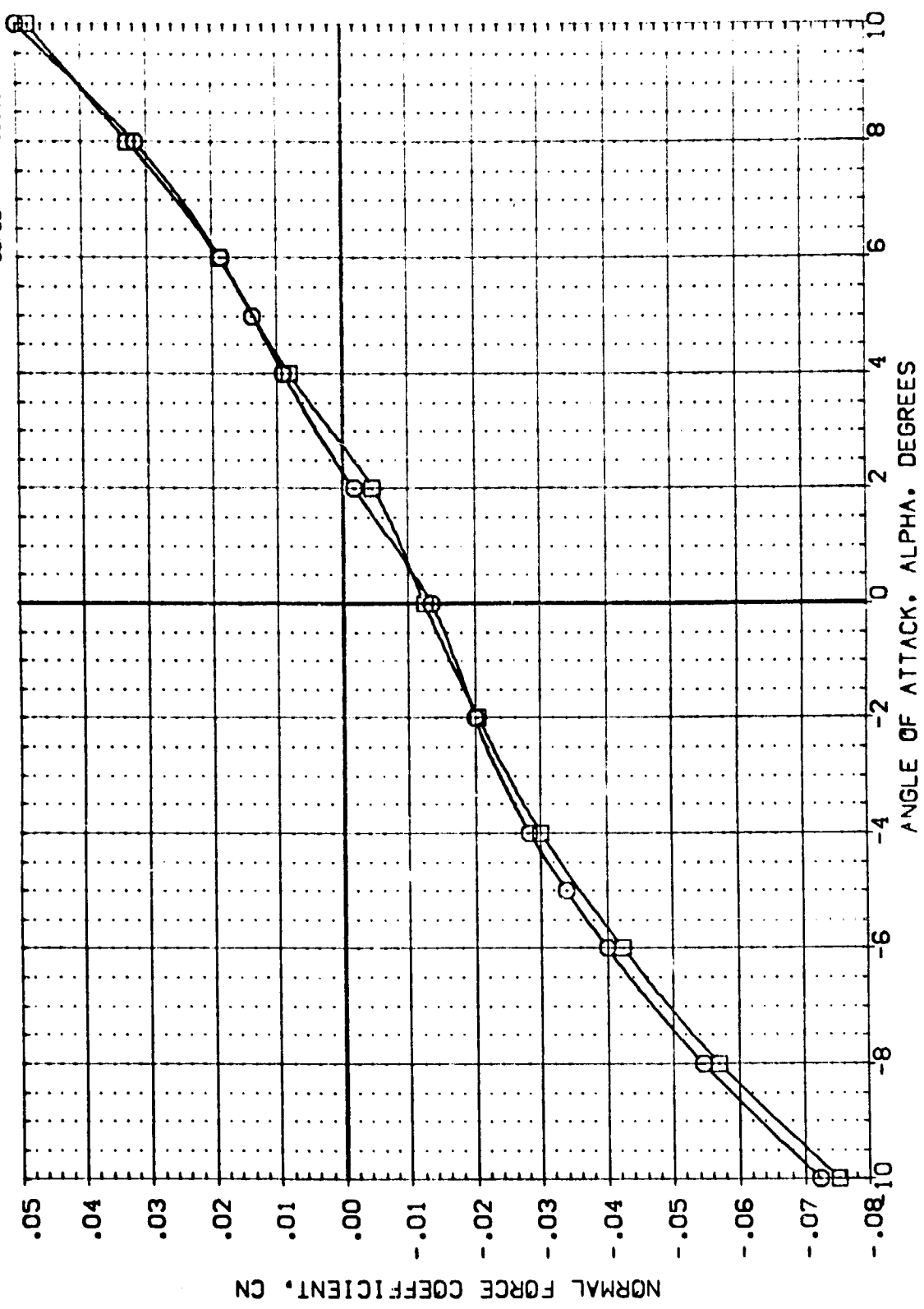


ANGLE OF ATTACK, ALPHA, DEGREES

EFFECT ON SRB OF SPACERS (FOR AND AFT) ATTACHED TO 03

(A) MACH = 1.25

DATA SET: SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	SPACER	SPADIA	SPAGAP	REFERENCE INFORMATION	
(083502)	MSFC 570((A3)F)(S3/2)/(03)/(T9)/(S3/2)	.500	.000	.000	.000	SREF	9720
(083553)	MSFC 570((A3)F)(S3/2)/(03)/(T9)/(S3/2)Y20	.500	.000	.200	.050	LREF	5.3130
						BREF	5.3130
						XMRP	2.5490
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0040

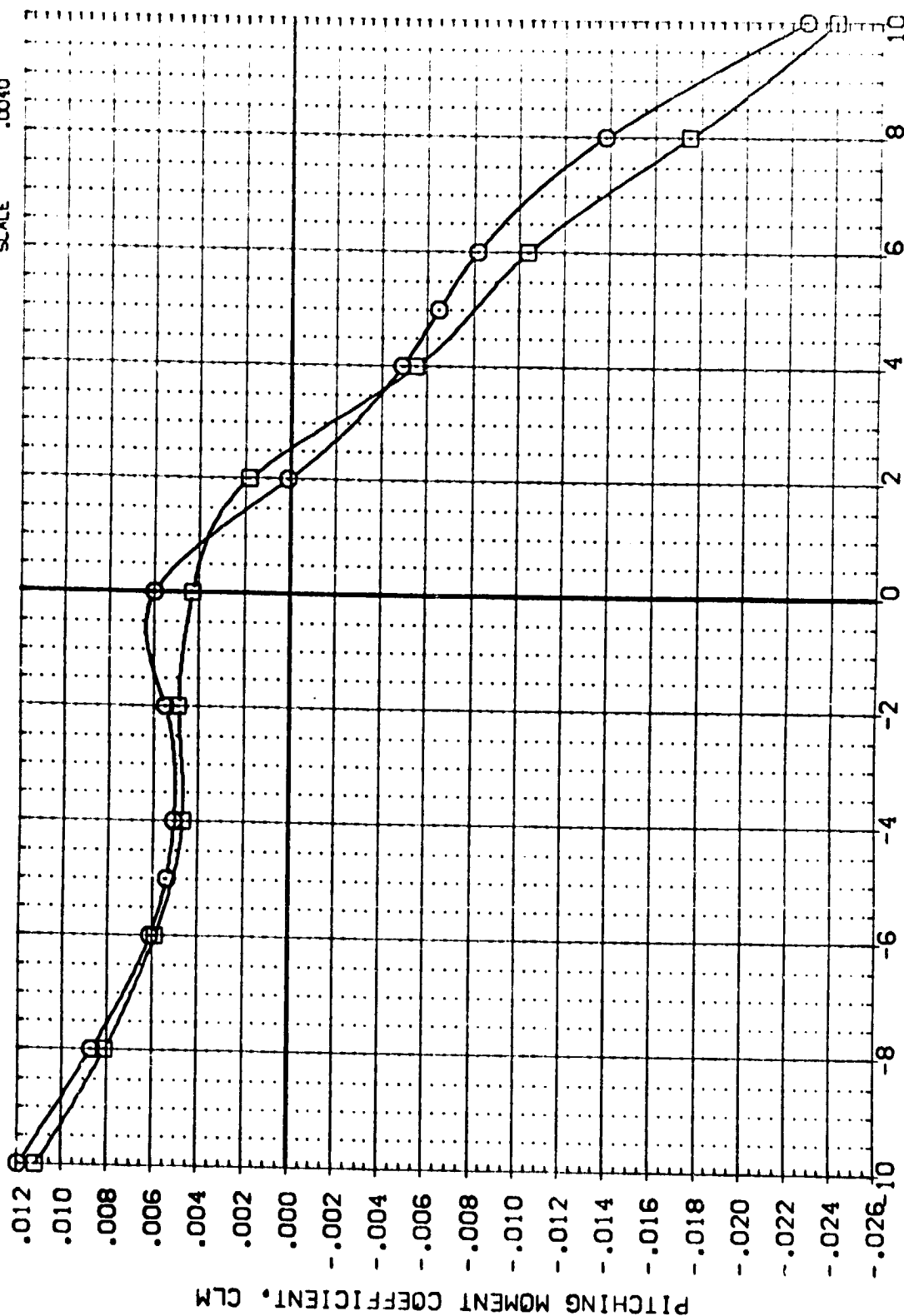


EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: 083502) 083553) CONFIGURATION DESCRIPTION: MSFC 570(1A31F)(S3/2)/(03)/(19)/(S3/2) MSFC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)Y20

ORBITAL	SPACER	SPAD1A	SPAD1B	REFERENCE INFORMATION
.500	.000	.000	.000	SREF 9720
.500	.000	.000	.050	LREF 5.3130
.500	.000	.000	.000	BREF 5.3130
.500	.000	.000	.000	YMRP 2.5490
.500	.000	.000	.000	ZMRP .0000
.500	.000	.000	.000	SCALE .0010



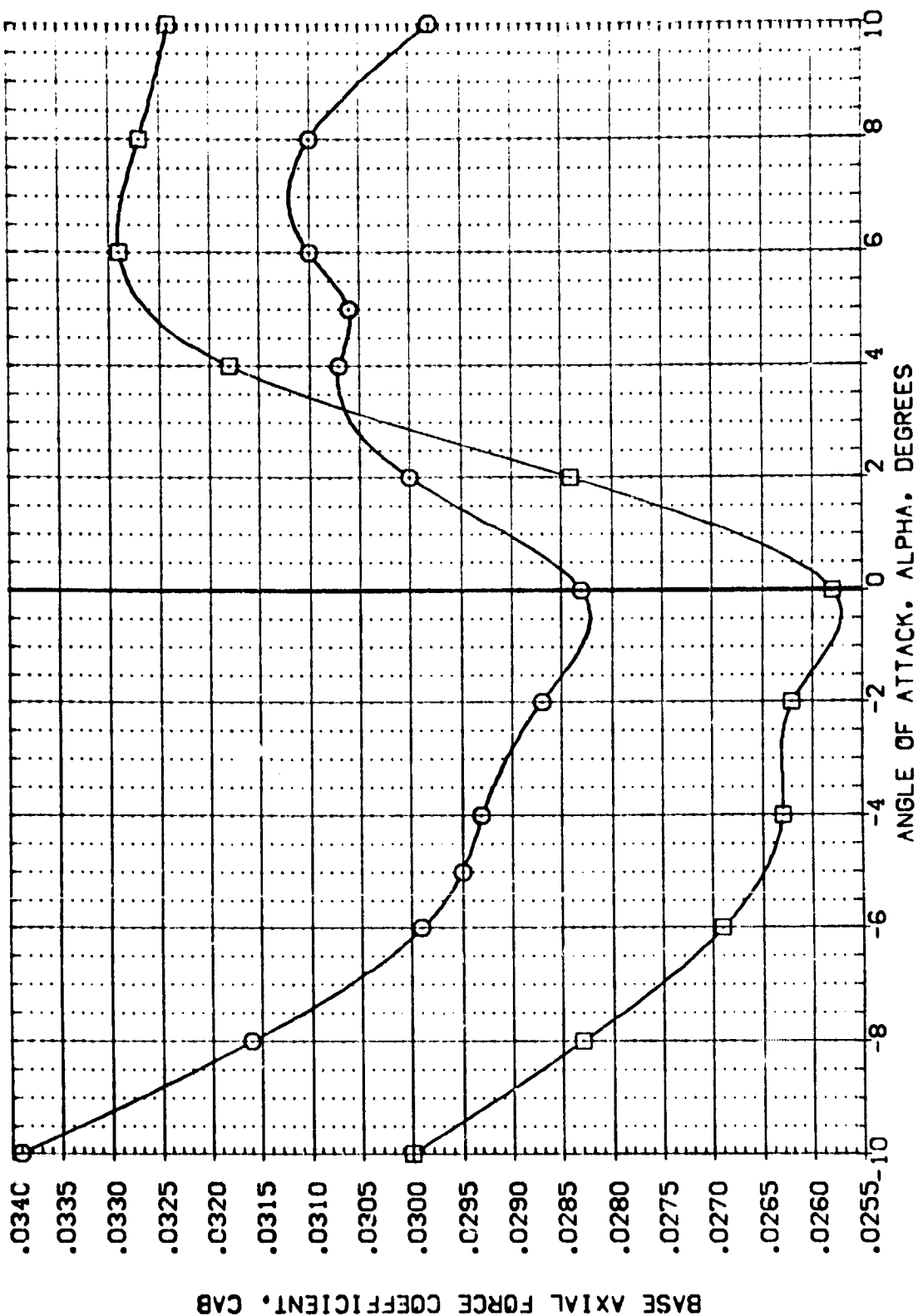
EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO O3

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (080502) ☐ MSC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)
 (080503) ☐ MSC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)Y20

ORBITING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 21.000 .050

REFERENCE INFORMATION
 SREF .9720 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0040



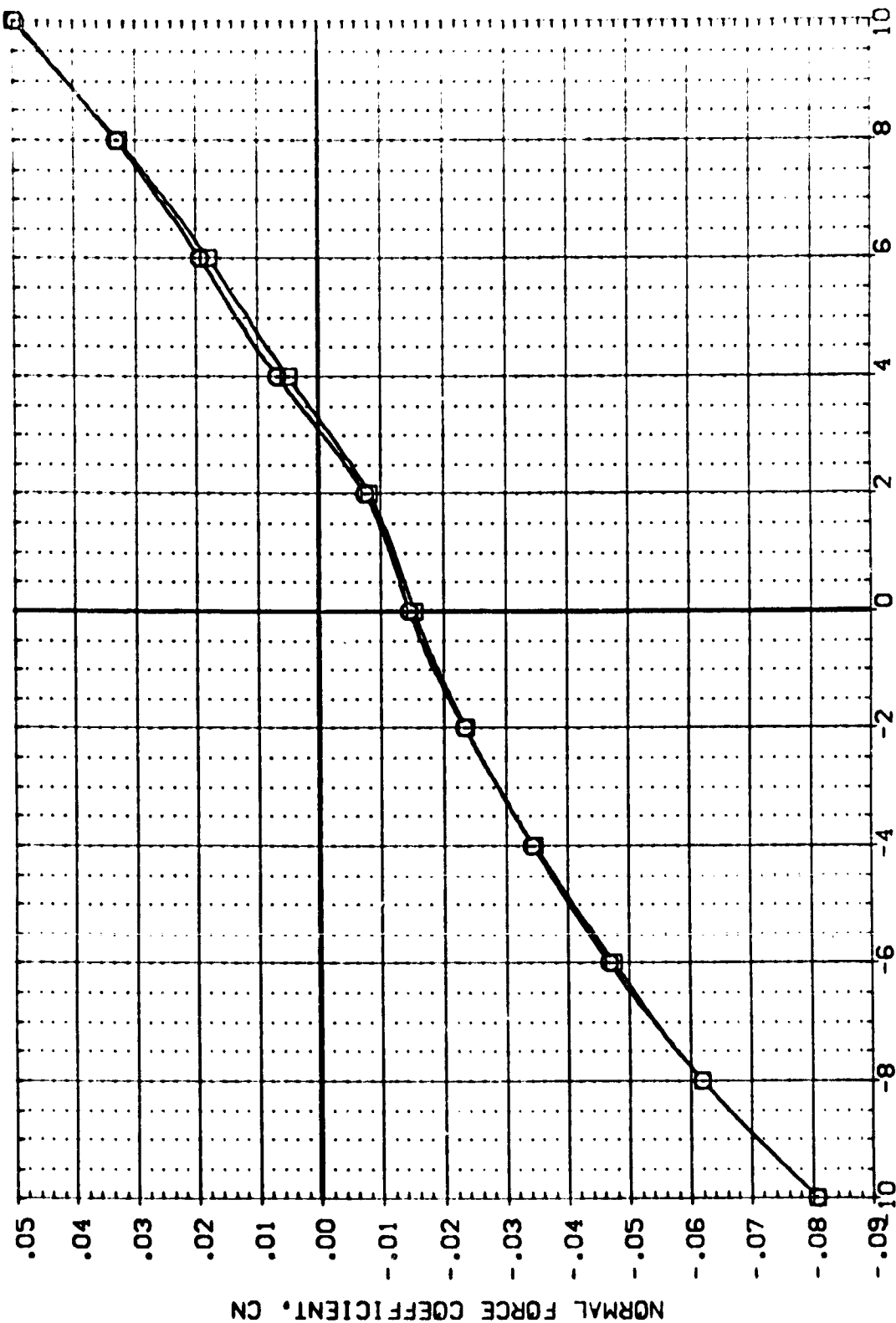
EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL: (080534) (080557)
 CONFIGURATION DESCRIPTION:
 MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)(S3/2)
 MSFC 5701(A31F)(S3/2)/(03)/(T9)(U5)(S3/2)Y20


ORBITING: .500
 SPACER: .000
 SPADIA: .000
 SPAGAP: .000
 .200
 .050

REFERENCE INFORMATION:
 SREF: .9720
 LREF: 5.3:30
 BREF: 5.3:30
 XMRP: 2.5:50
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



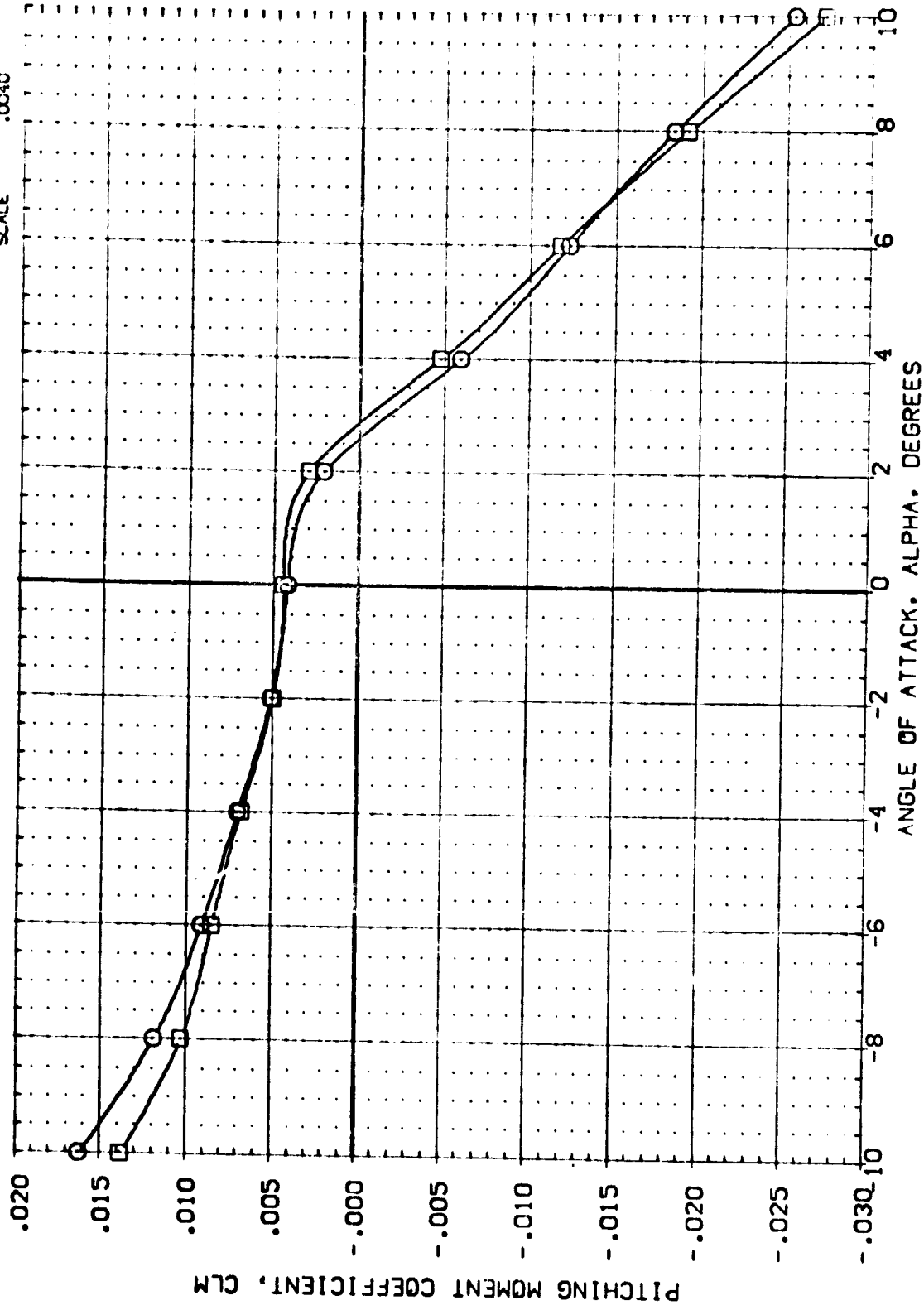
EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO 03 (WITH ATTACH HARDWARE)

(A)MACH = 1.24

DATA SET SYMBOL: (080534)
 (080557)  CONFIGURATION DESCRIPTION
 MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)(S3/2)
 MSFC 570(IA3IF)(S3/2)/(03)/(T9)(U5)/(S3/2)Y20

ORBITAL ORIGIN SPACER SPADIA SPAGAP
 .500 .000 .000 .000
 .500 21.000 .050

REFERENCE INFORMATION
 SREF .9720 SQ IN
 LREF 5.3130 IN
 BREF 2.3130 IN
 XMRP 2.5450 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



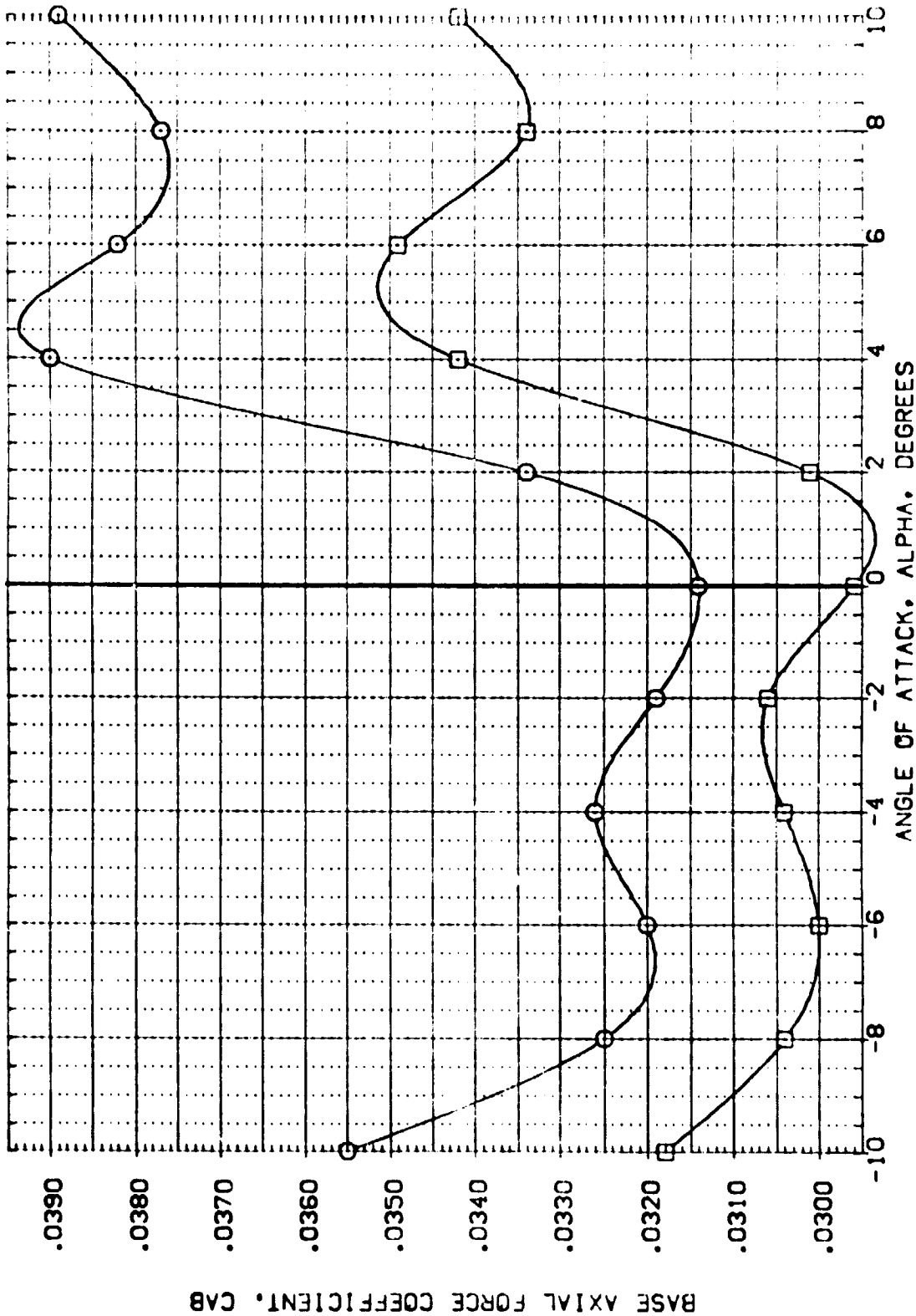
EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO 03 (WITH ATTACH HARDWARE)

() MACH = 1.24

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (080534) MSFC 570((A3)F)((S3/2)/(03)/(T9)(U5)((S3/2)Y20
 (080537) MSFC 570((A3)F)((S3/2)/(03)/(T9)(U5)((S3/2)Y20

ORBITAL SPACER SPADIA SPADAP
 .500 .000 .000
 .500 21.000 .050

REFERENCE INFORMATION
 SREF .5720 SQ:
 LREF 5.3130 Z:
 BREF 5.3130 Z:
 XPROP 2.5480 Z:
 YPROP .0000 Z:
 ZPROP .0000 Z:
 SCALE .0040



EFFECT ON SRB OF FWD SPACER ONLY ATTACHED TO 03 (WITH ATTACH HARDWARE)

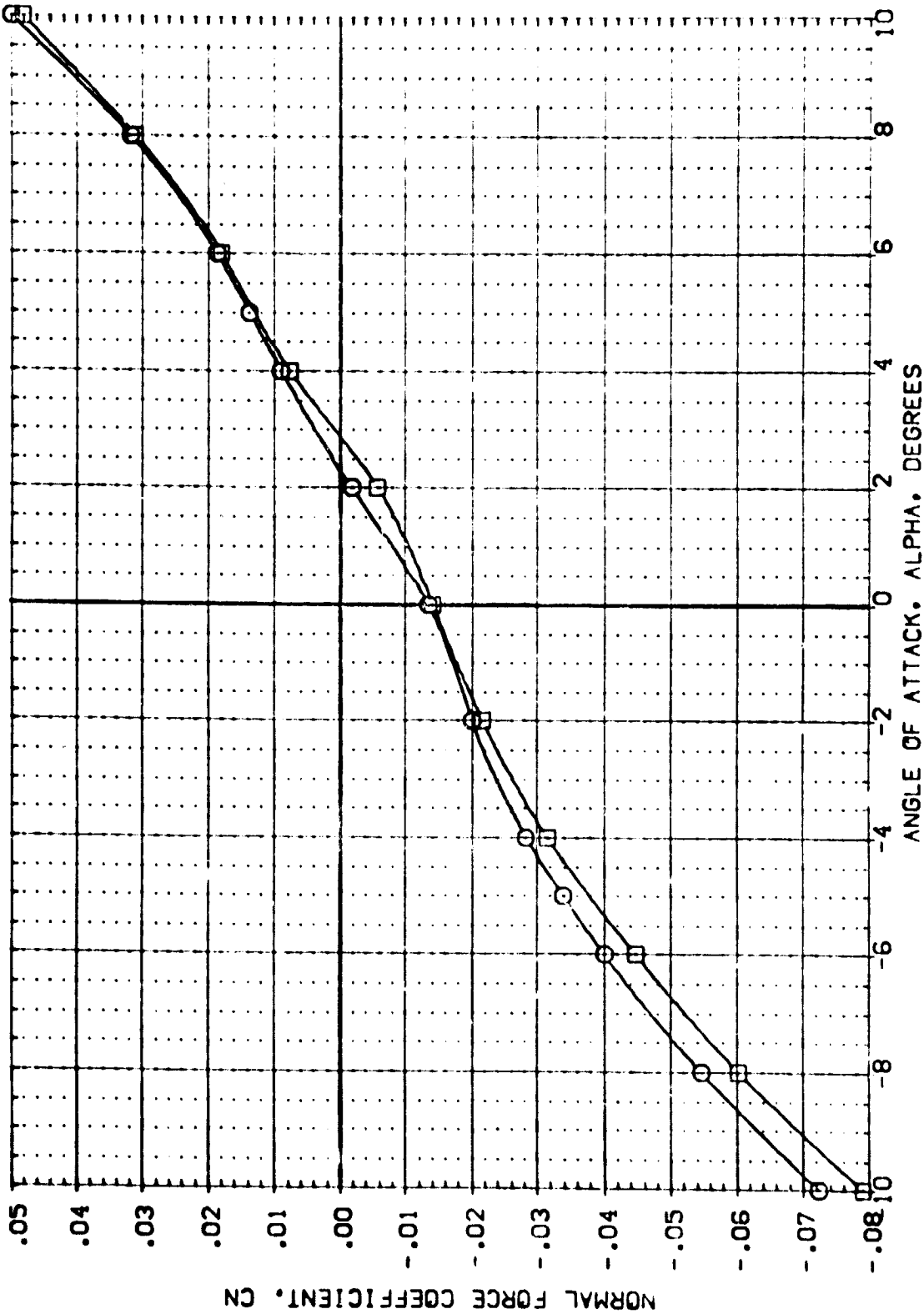
(A)MACH = 1.24

PAGE 584

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 {D00002} H8FC 570(IA3IF)(S3/2)/(03)/(19)/(S3/2)
 {D00004} H8FC 570(IA3IF)(S3/2)/(03)/(19)/(S3/2)Y30

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .220 .050

REFERENCE INFORMATION
 SREF .9720 90 IN
 LREF 5.3130 N N
 BREF 5.3130 N N
 XTRP 2.5490 IN
 YTRP .0000 IN
 ZTRP .0000 IN
 SCALE .0040



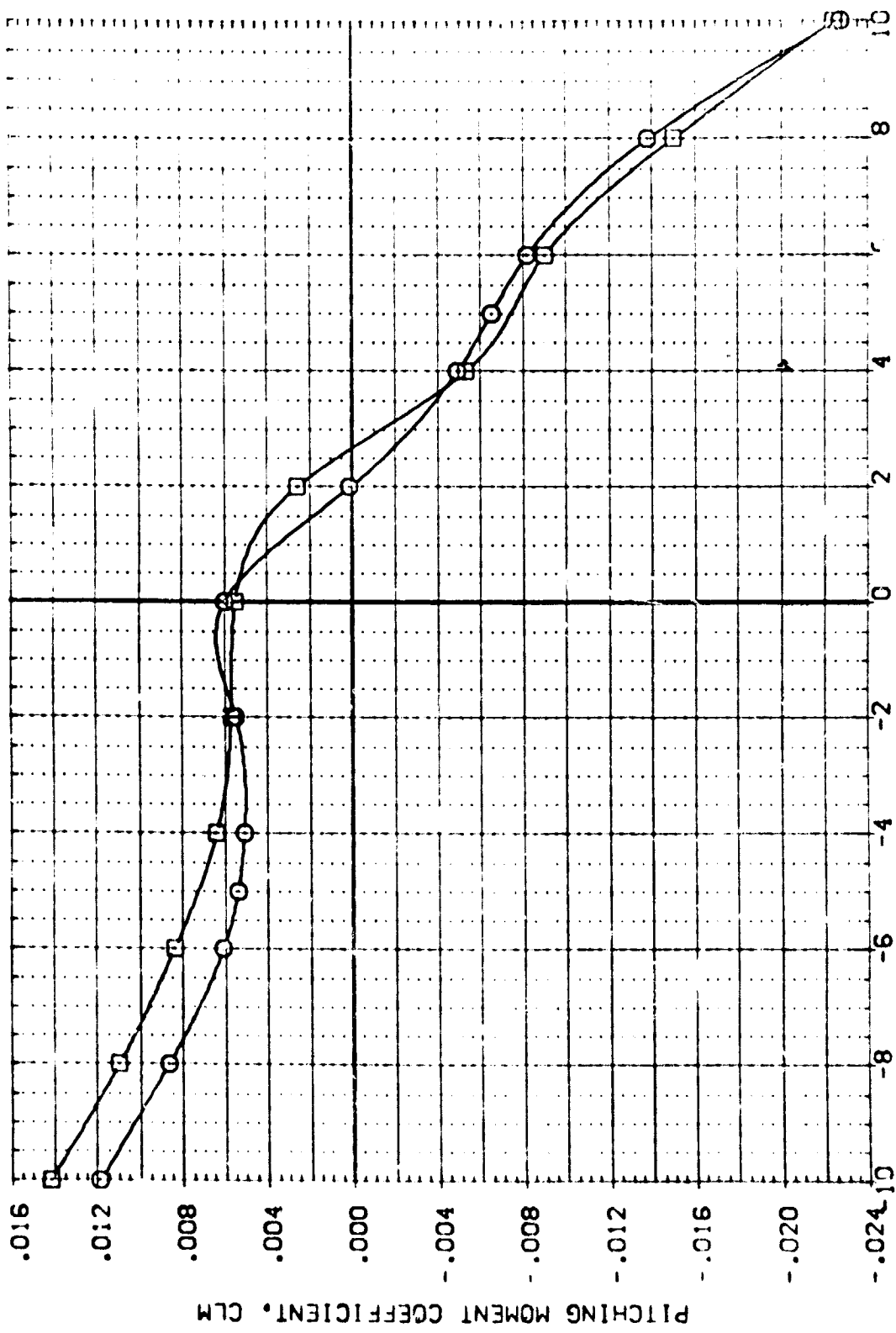
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO 03

(MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (08502) MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)
 (08554) MSFC 5701(A31F)(S3/2)/(03)/(19)/(S3/2)V30

DRBING SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .120 .050

REFERENCE INFORMATION
 SREF .9720
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



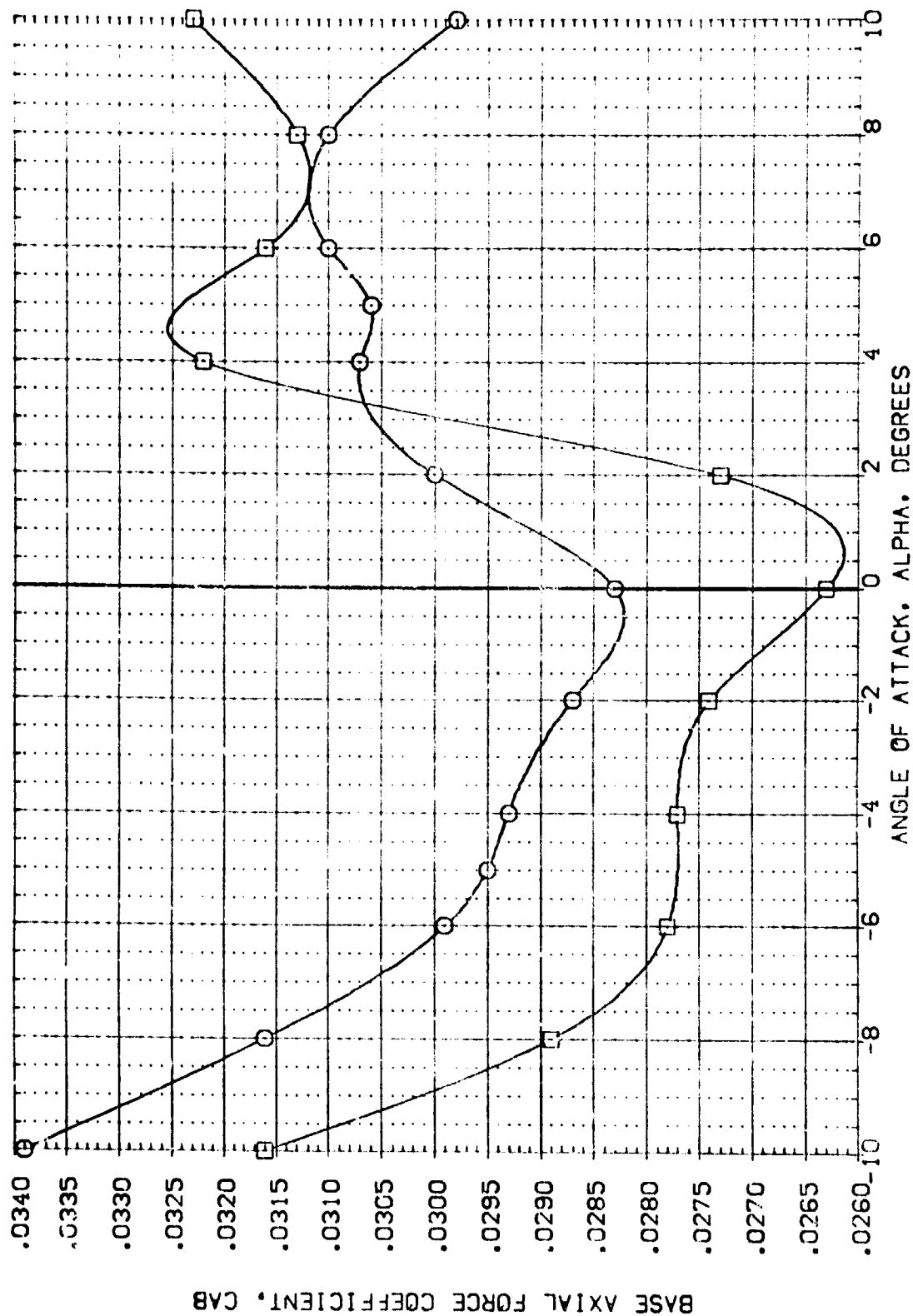
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (083502) □ MSFC 570((A31F)(S3/2)/(03)/(T9))/(S3/2)
 (083534) □ MSFC 570((A31F)(S3/2)/(03)/(T9))/(S3/2)Y39

ORBITAL SPACER SPADIA SPAGAP
 .500 .000 .000
 .500 .220 .050

REFERENCE INFORMATION
 SREF .9720 S3 IN
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



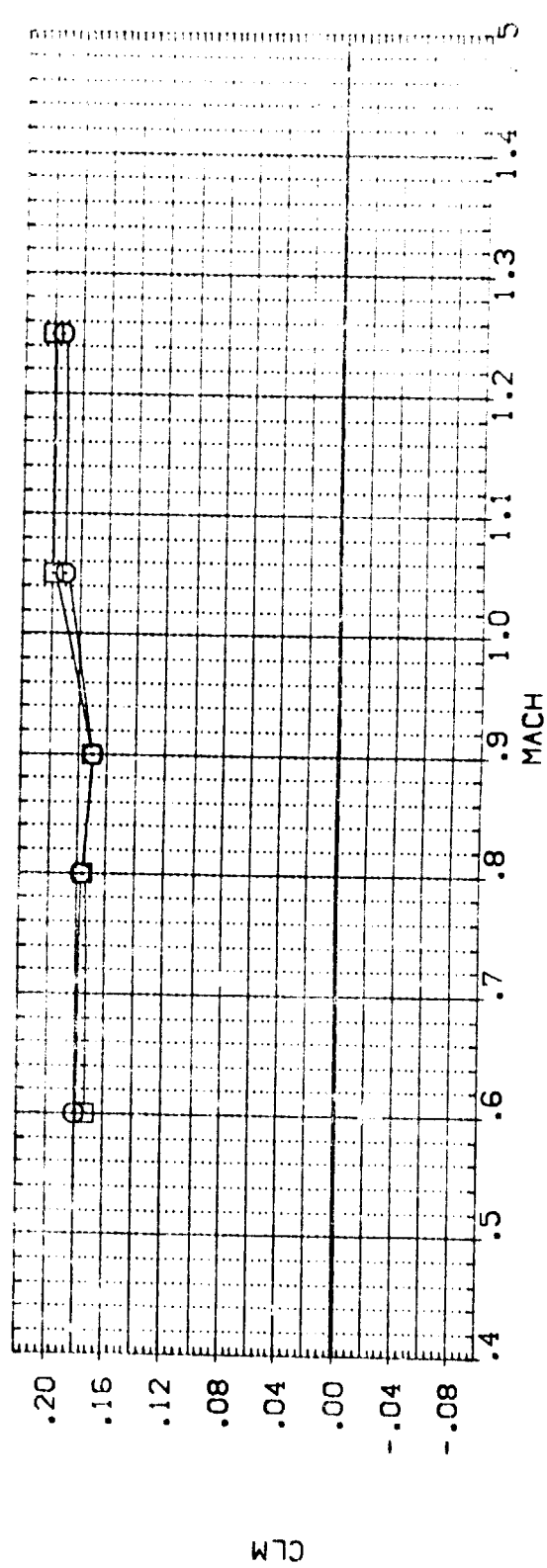
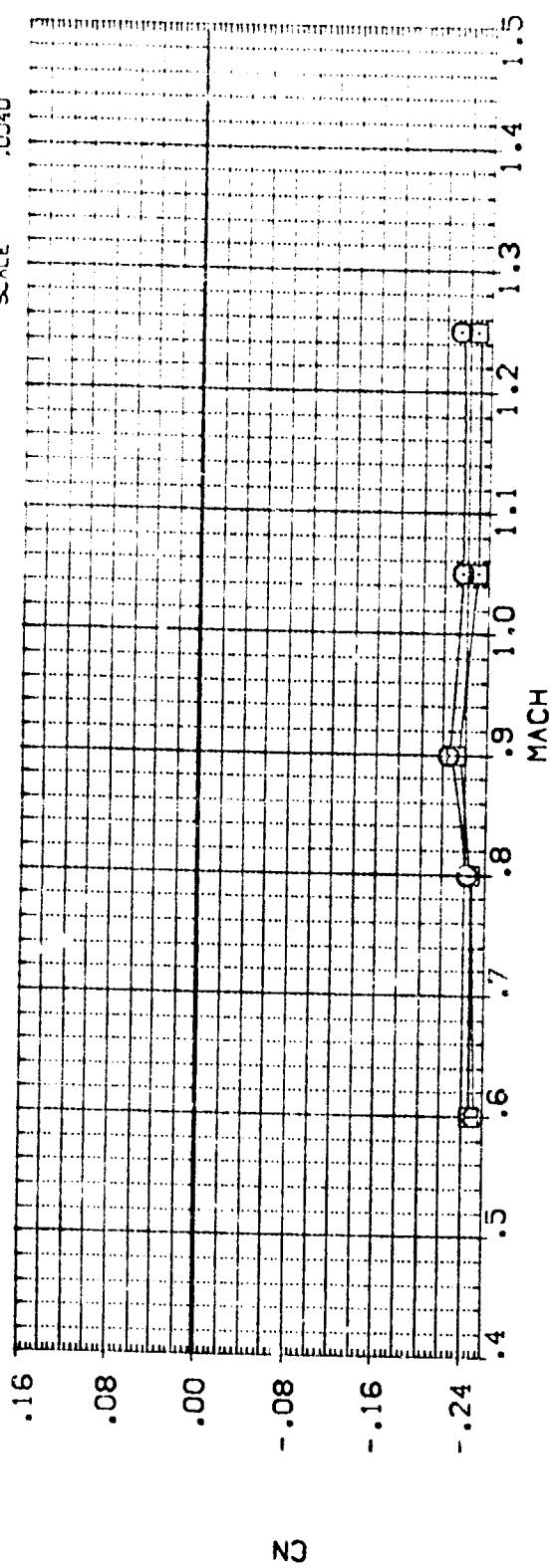
EFFECT ON SRB OF AFT SPACER ONLY ATTACHED TO 03

(A)MACH = 1.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (060001) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2) 0
 (060002) MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

BETA ORBINC DELTAZ
 .000 .500 .140
 .000 .500 .140

REFERENCE INFORMATION
 SREF 6.1980 SC
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

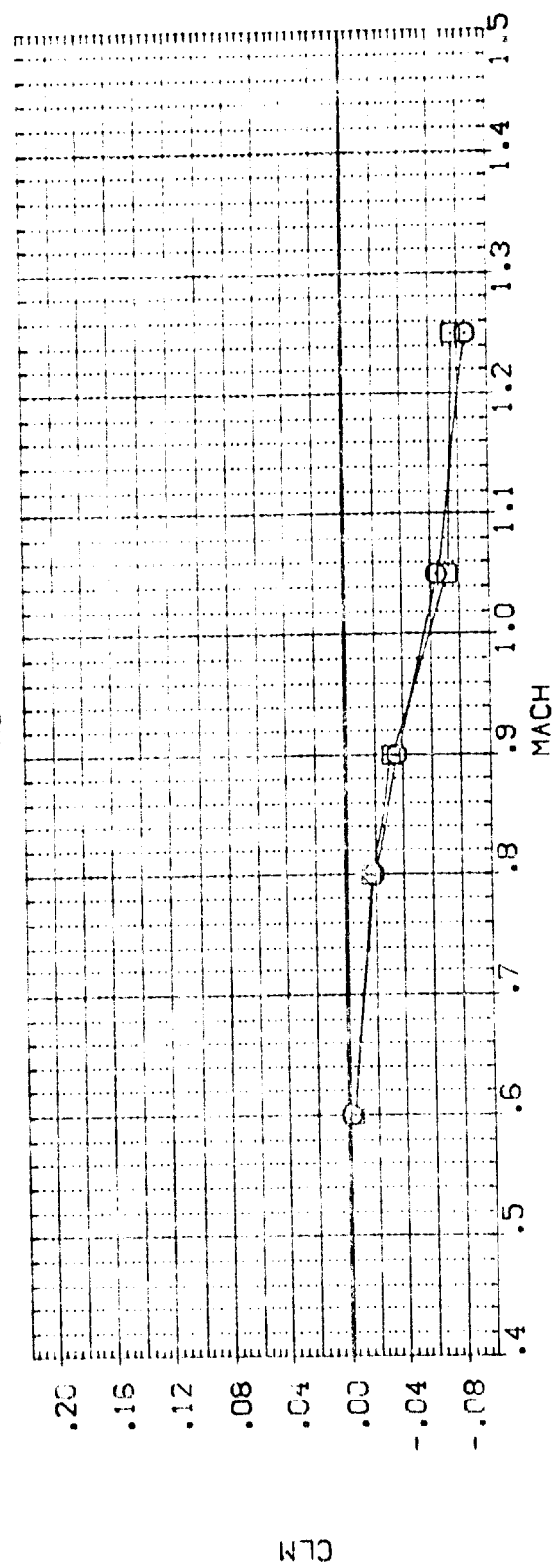
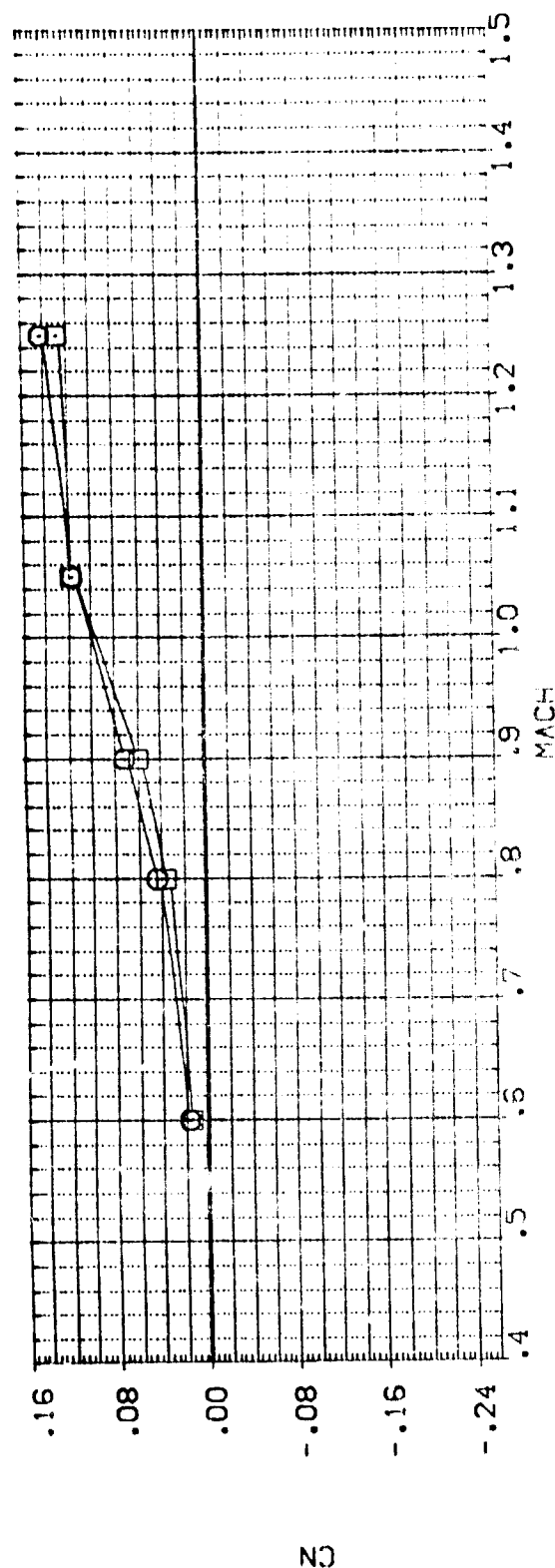
(A) ALPHA = -8.00

DATA SET SYM-001
 (G830051)
 (G830002)

CONFIGURATION DESCRIPTION
 MSFC 570 (A31F) (03)/(T9)/(S3/2) 0
 MSFC 570 (A31F) (03)/(T9)/(S3/2)

BETA ORBIT INC DELTA Z
 .000 .500 .140
 .000 .500 .140

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0010



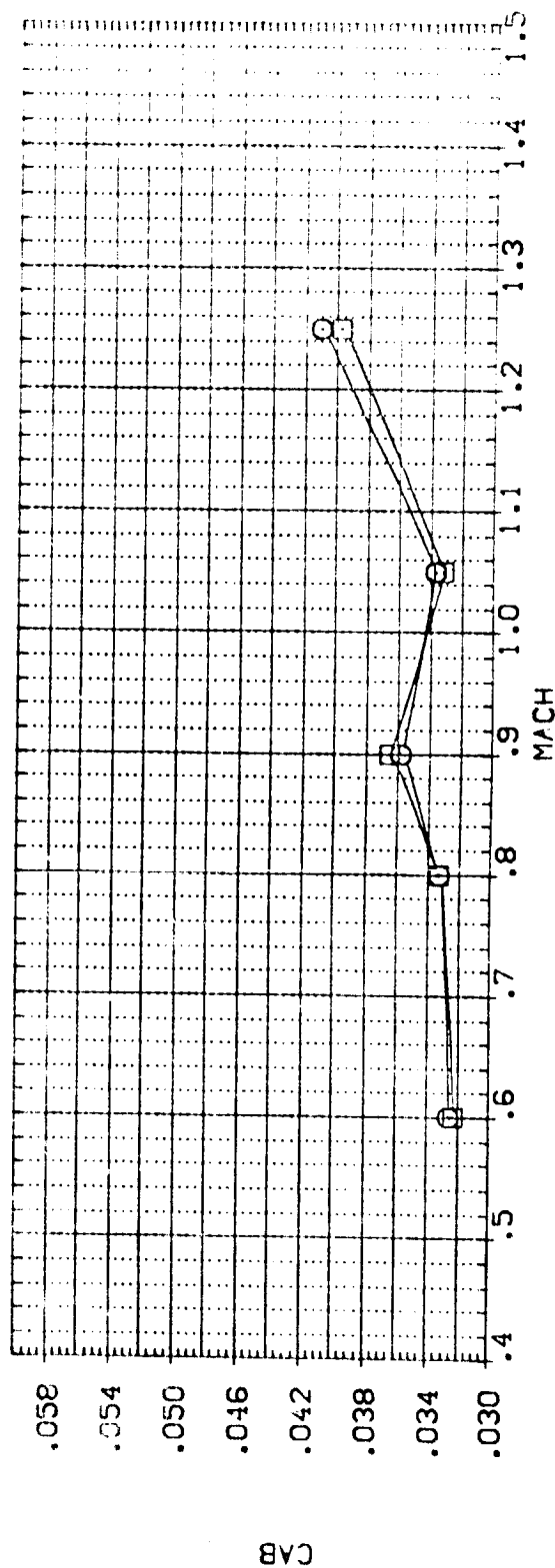
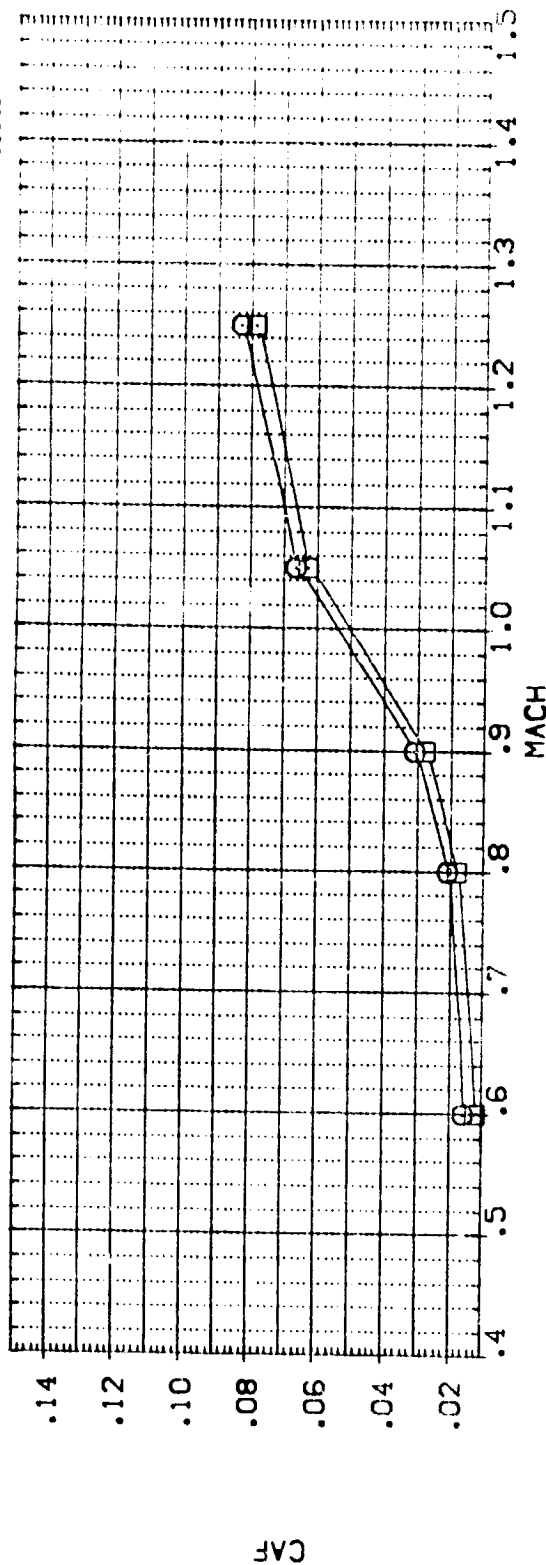
GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

(B) ALPHA = .00

DATA SET SYMBOL: (083002) (083001)
 CONFIGURATION DESCRIPTION: MSFC 570 (A31F)(03)/(T9)/(S3/2)/(S3/2) 6
 MSFC 570 (A31F)(03)/(T9)/(S3/2)/(S3/2)

BETA: .000
 ORBITAL: .500
 DELTA Z: .140

REFERENCE INFORMATION:
 SREF: 6.1930
 LREF: 5.3130
 BREF: 5.3130
 XMR0: 2.5480
 YMR0: .0000
 ZMR0: .0000
 SCALE: .0010

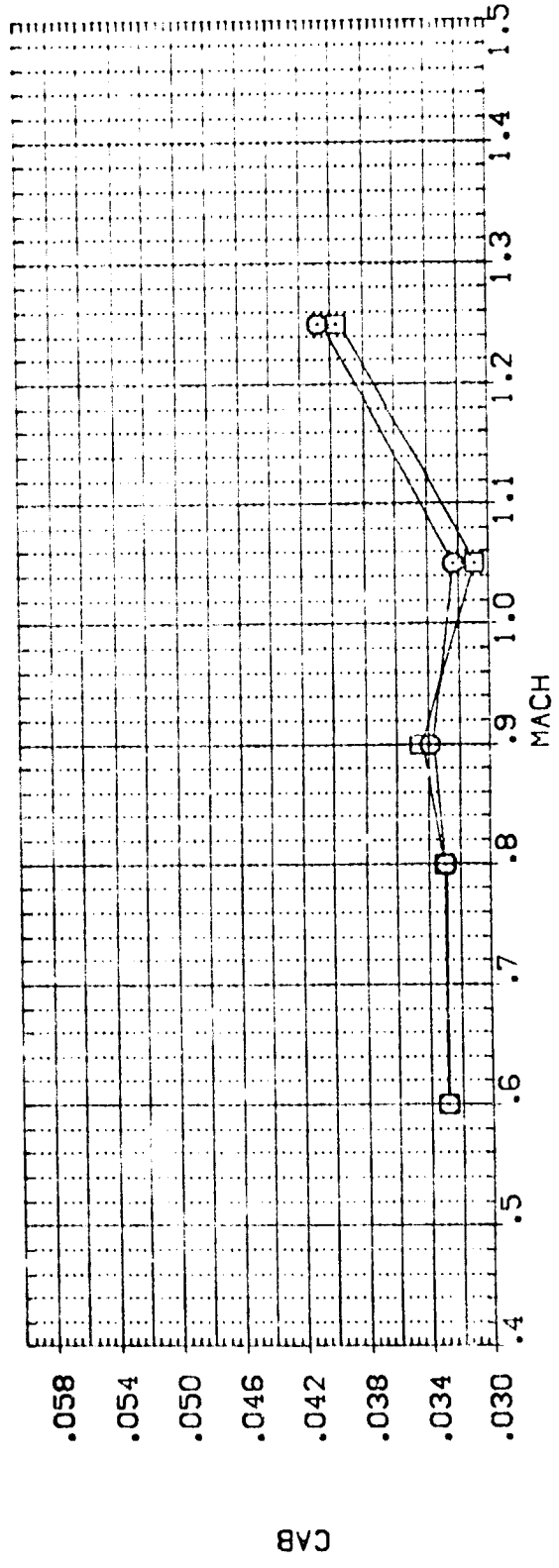
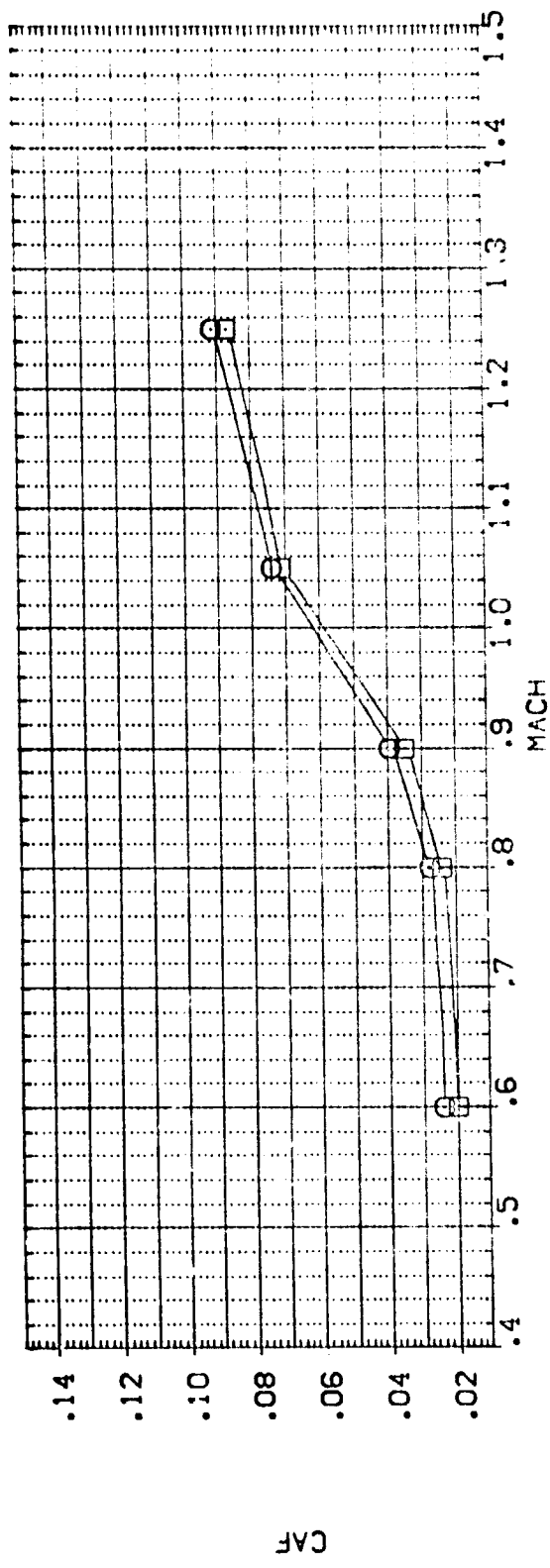


GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

(A) ALPHA = -8.00

DATA SET SYMBOL: (883061) (883002)
 CONFIGURATION DESCRIPTION: MSFC 570(I A3 I F)(03)/(T9)/(S3/2)/(S3/2) 0
 MSFC 570(I A3 I F)(03)/(T9)/(S3/2)/(S3/2)
 REFERENCE INFORMATION:
 SREF: 5.1990 SQ: IN
 LREF: 5.3130 IN:
 BREF: 5.3130 IN:
 XMRP: 2.5490 IN:
 YMRP: .0000 IN:
 ZMRP: .0000 IN:
 SCALE: .0010

BETA: .000
 ORBINC: .500
 DELTAZ: .140



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

(B) ALPHA = .00

DATA SET SYMBOL: ☐ (003T01) ☐ (003T02)

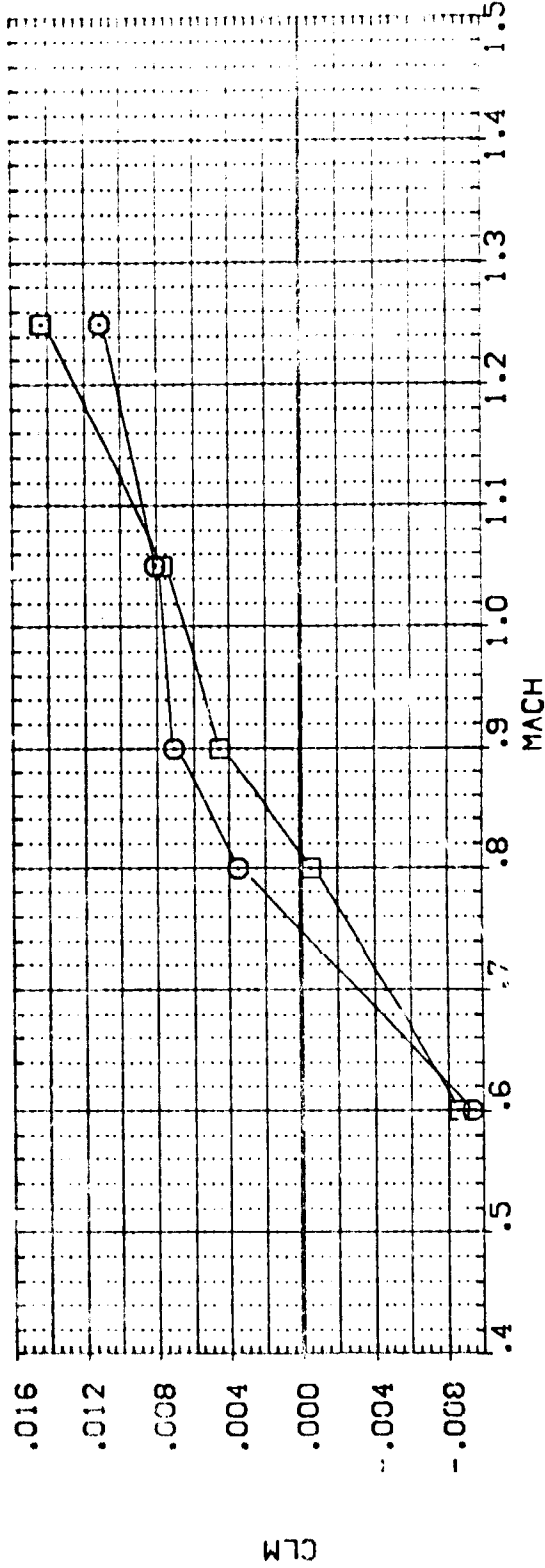
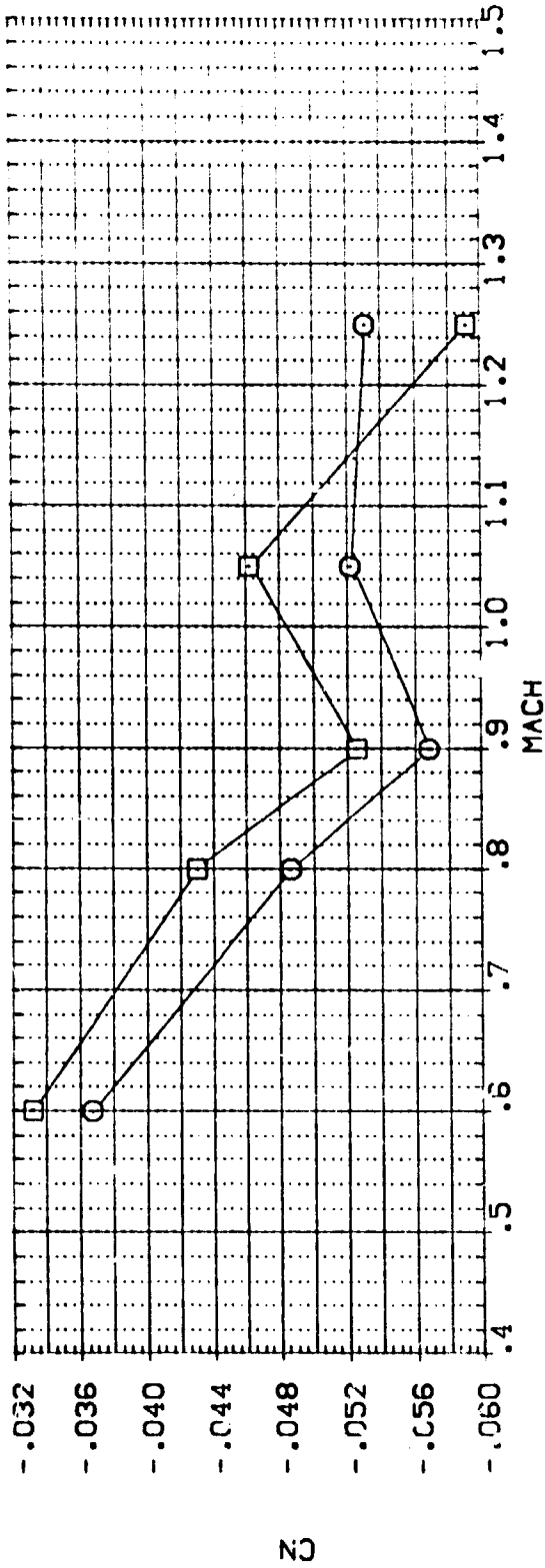
CONFIGURATION DESCRIPTION:
 MSFC 570(IA3IF) (T9)/(03)/(S3/2)/(S3/2) G
 MSFC 570(IA3IF) (T9)/(03)/(S3/2)/(S3/2)

BETA: .000
 .000

ORBITAL: .500
 .500

DELTA Z: .140
 .140

REFERENCE INFORMATION:
 SREF: 6.1980 50. IN
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0010



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

CAJALPHA = .00

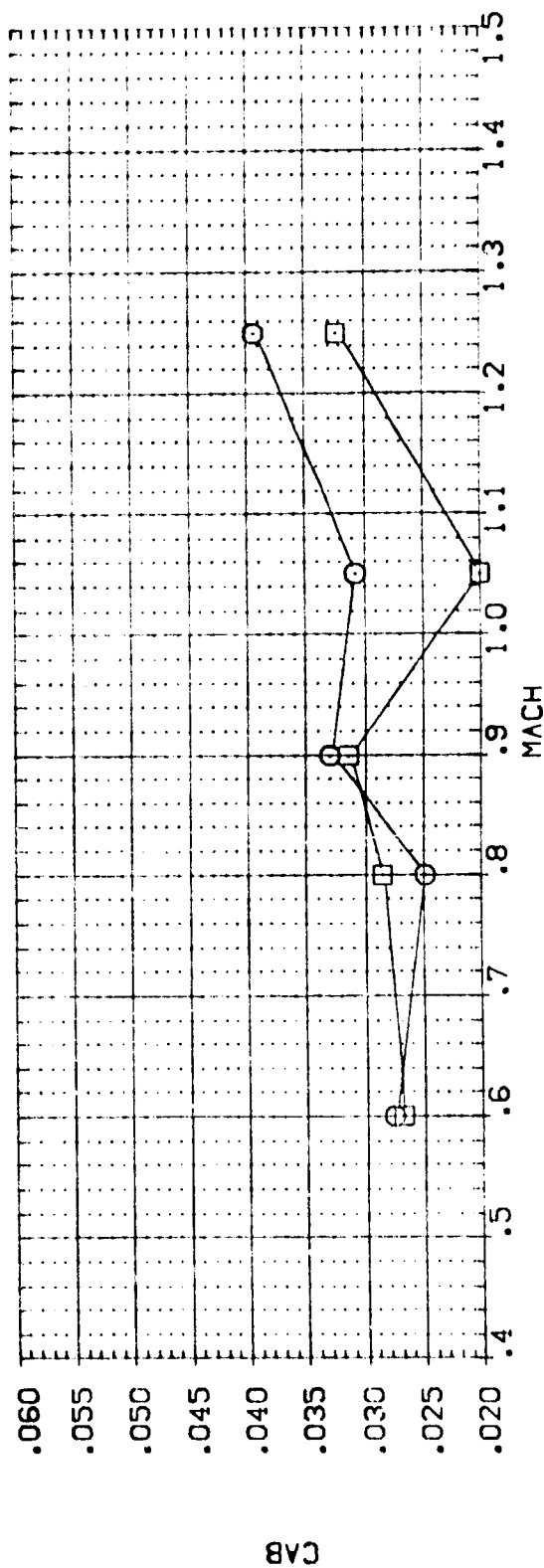
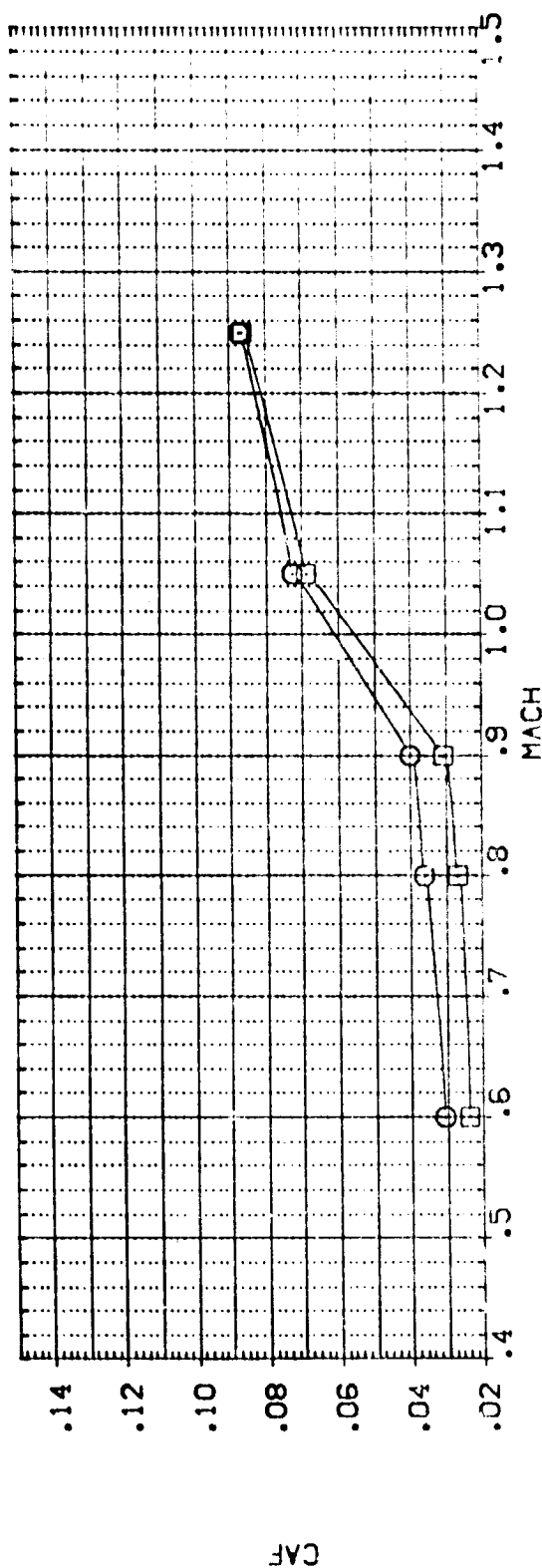
DATA SET SYMBOL: (G83T61) (G83T02)

CONFIGURATION DESCRIPTION: MSFC 570((A31F) (T9)/(03)/(S3/2)/(S3/2) 6 MSFC 570((A31F) (T9)/(03)/(S3/2)/(S3/2)

BETA: .000

ORBITAL DELTA Z: .500 .140

REFERENCE INFORMATION: SREF: 6.1980 SC: 1.000 LREF: 5.3130 BREF: 5.3130 XMRP: 2.5450 YMRP: .0000 ZMRP: .0000 SCALE: .0040



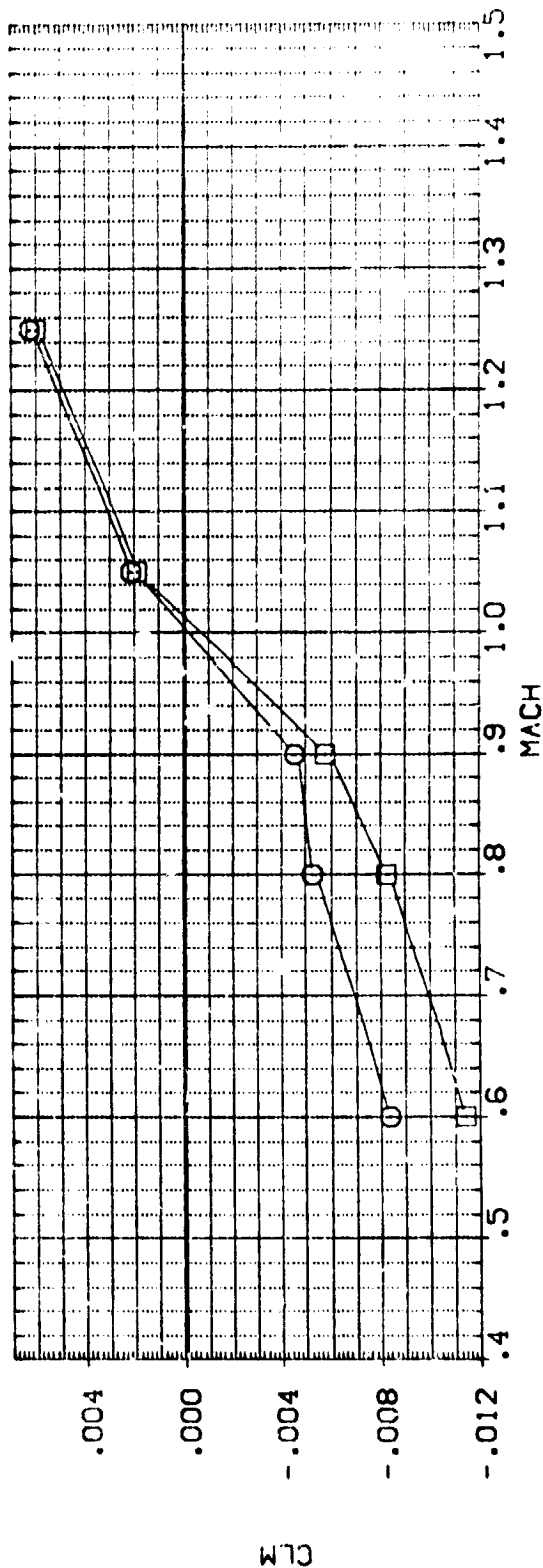
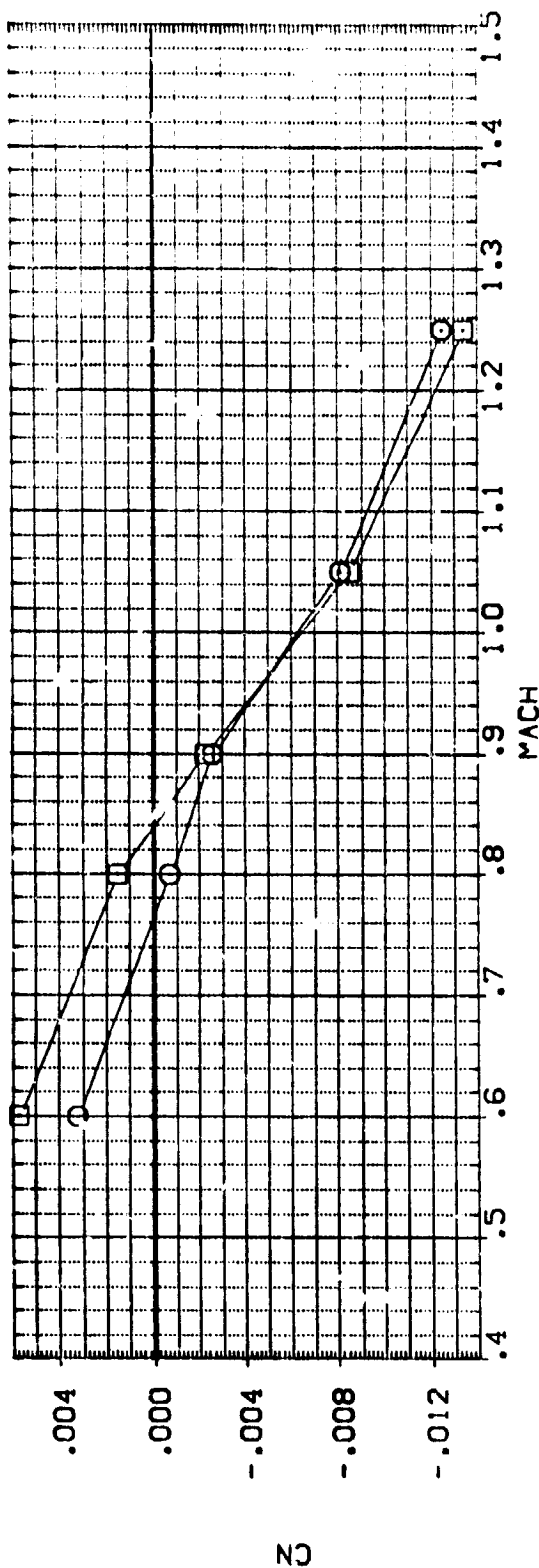
GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

(A)ALPHA = .00

DATA SET SYMBOL: (883551) (883502) CONFIGURATION DESCRIPTION: MSFC 570 (A31E) (S3/2)/(03)/(T9)/(S3/2) G MSFC 570 (A31F) (S3/2)/(03)/(T9)/(S3/2)

BETA: .000 .000 DRBING: .000 .500 DELTA Z: .140 .140

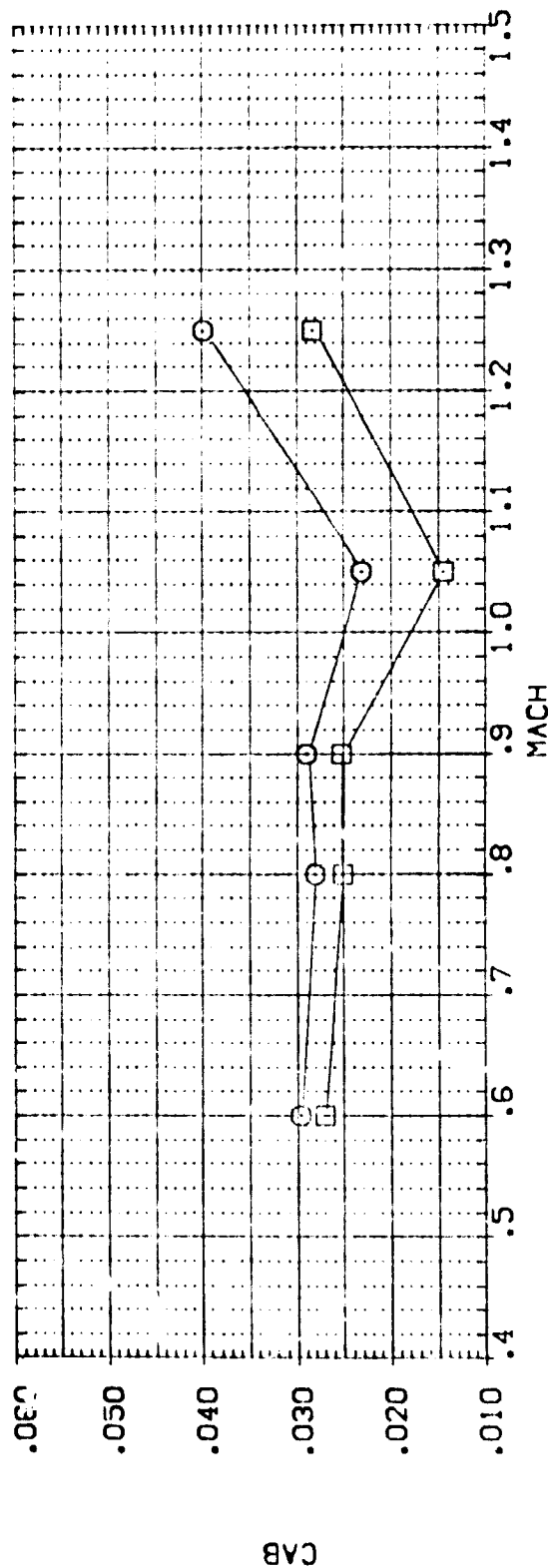
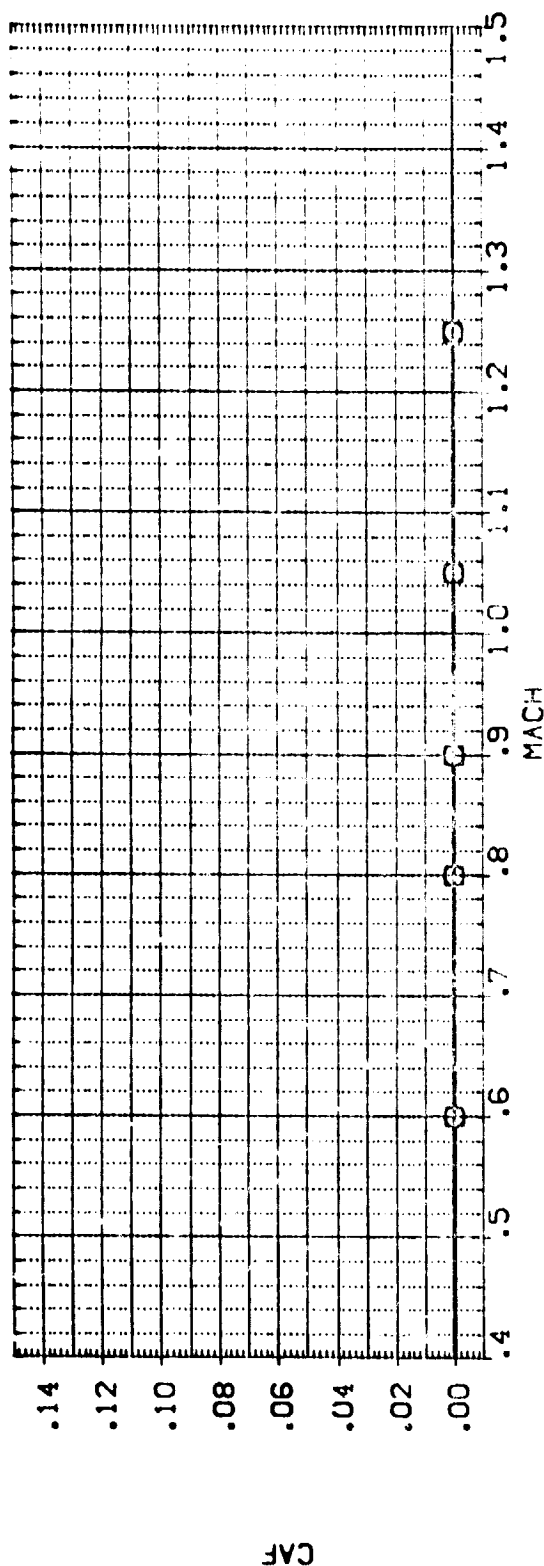
REFERENCE INFORMATION: SREF: .9720 32. IN LREF: 5.3130 2. ZREF: 5.3130 2. XMRP: 2.5450 2. YMRP: .0000 2. ZMRP: .0000 2. SCALE: .0040 2.



GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

(A) ALPHA = .00

DATA SET SYMBOL	CONF IGURATION DESCRIPTION	BETA	ORBITAL	DELTA Z	REFERENCE INFORMATION
(G80561)	MCFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2) 0	.000	.500	.140	SREF .9720 SQ. IN
(G80502)	MSFC 570(I A31F) (S3/2)/(03)/(T9)/(S3/2)	.000	.500	.140	LREF 5.3130 IN.
					BREF 5.3130 IN.
					XMRP 2.5490 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE .0040



GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

CALPHA = .00

REFERENCE INFORMATION

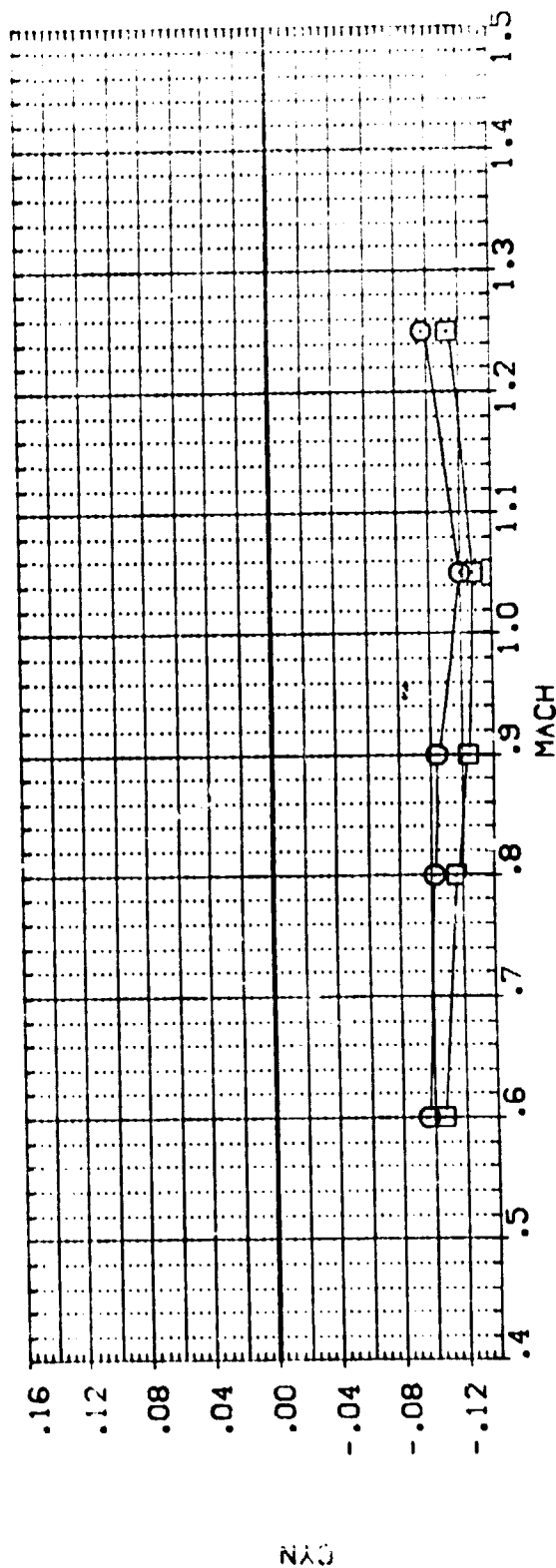
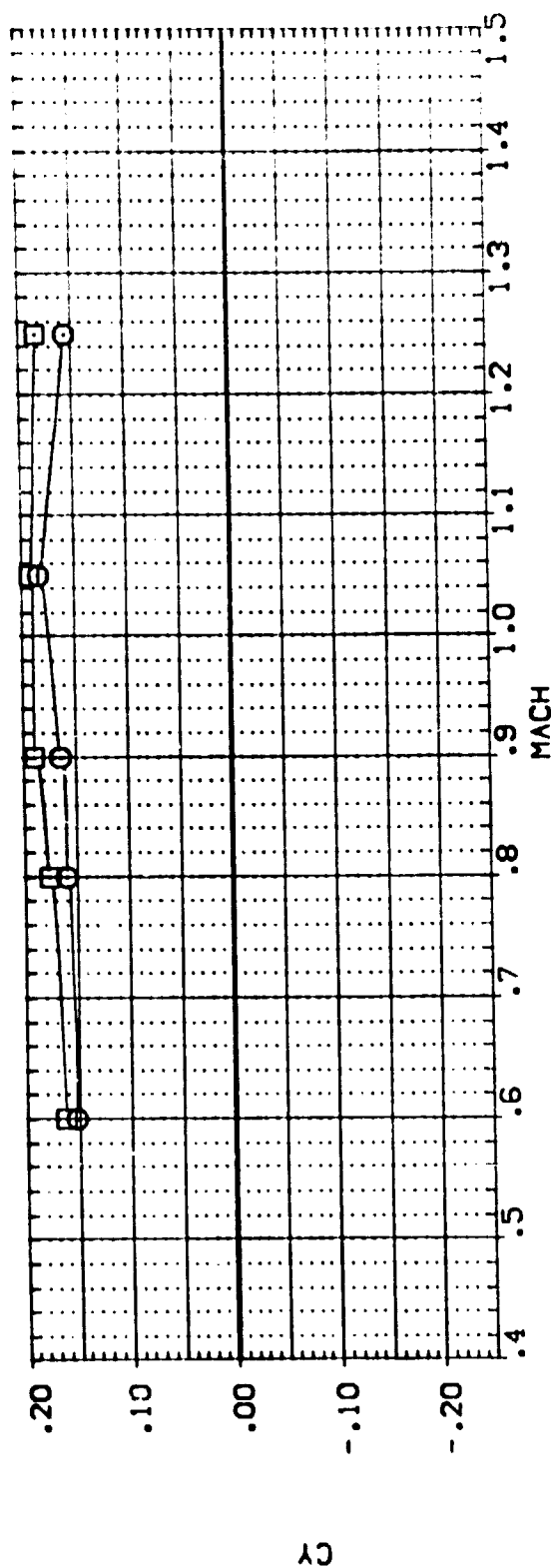
SREF	6.1980	SO.	IN
LREF	5.3130	N.	
BREF	5.3130	N.	
XMRP	2.5490	N.	
YMRP	.0000	N.	
ZMRP	.0000	N.	
SCALE	.0040		

ALPHA ORBITING DELTA Z

.000	.500	.140
.000	.500	.140

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(G3052)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2) G
(683007)	MSFC 570 (A31F) (03) / (T9) / (S3/2) / (S3/2)



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/((T9)/((S3/2)/((S3/2)

(A) BETA = -8.00

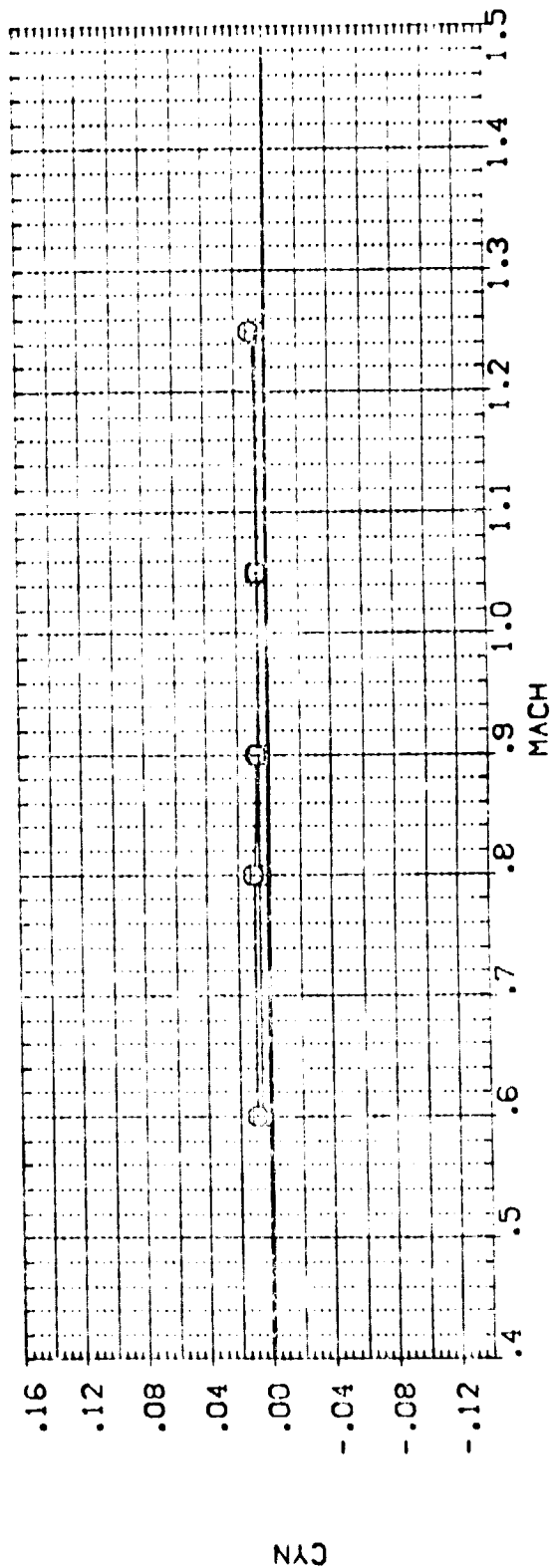
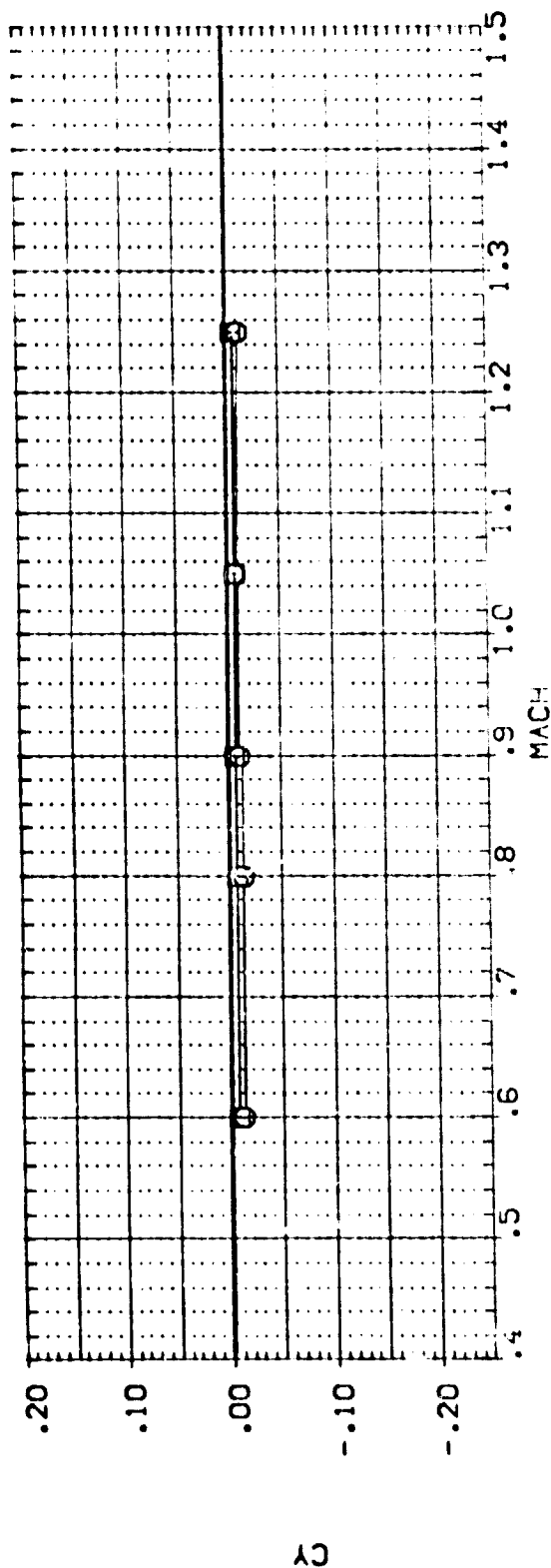
DATA SET SYMBOL
(083052)
(083007)

CONFIGURATION DESCRIPTION
SFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2) G
SFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA
.000
.500
.500

DELTA Z
.140
.140

REFERENCE INFORMATION
SREF 6.1880 SQ. IN.
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5450 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0040



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

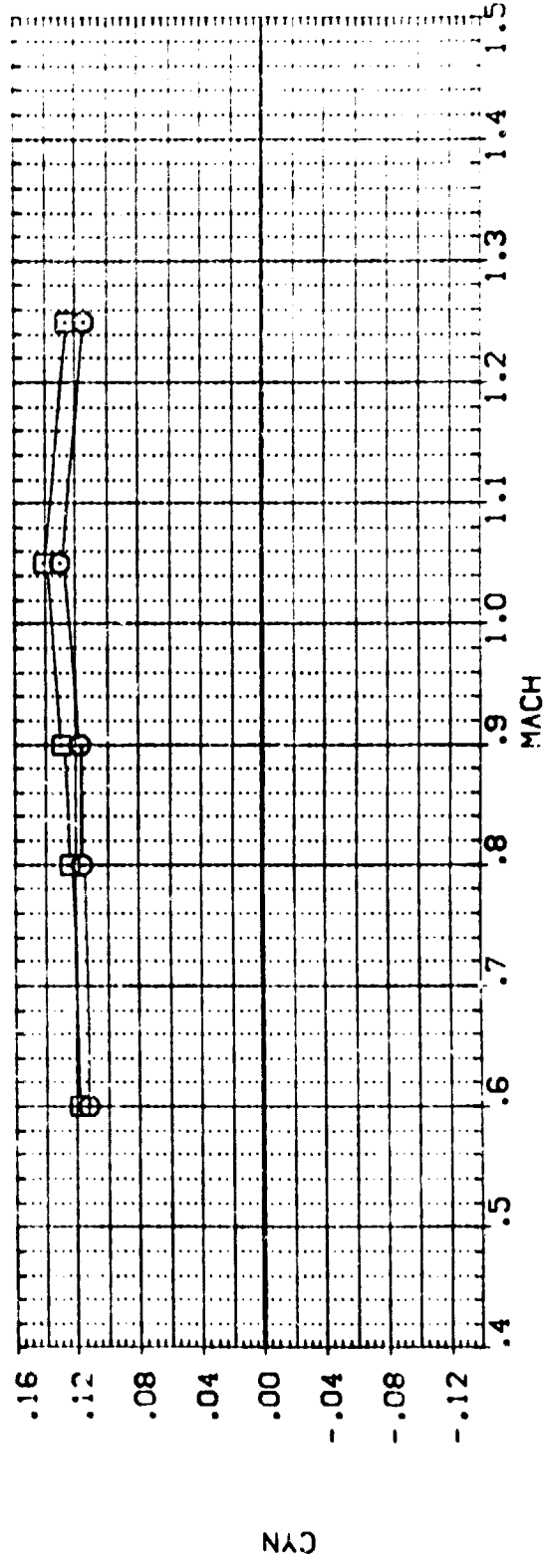
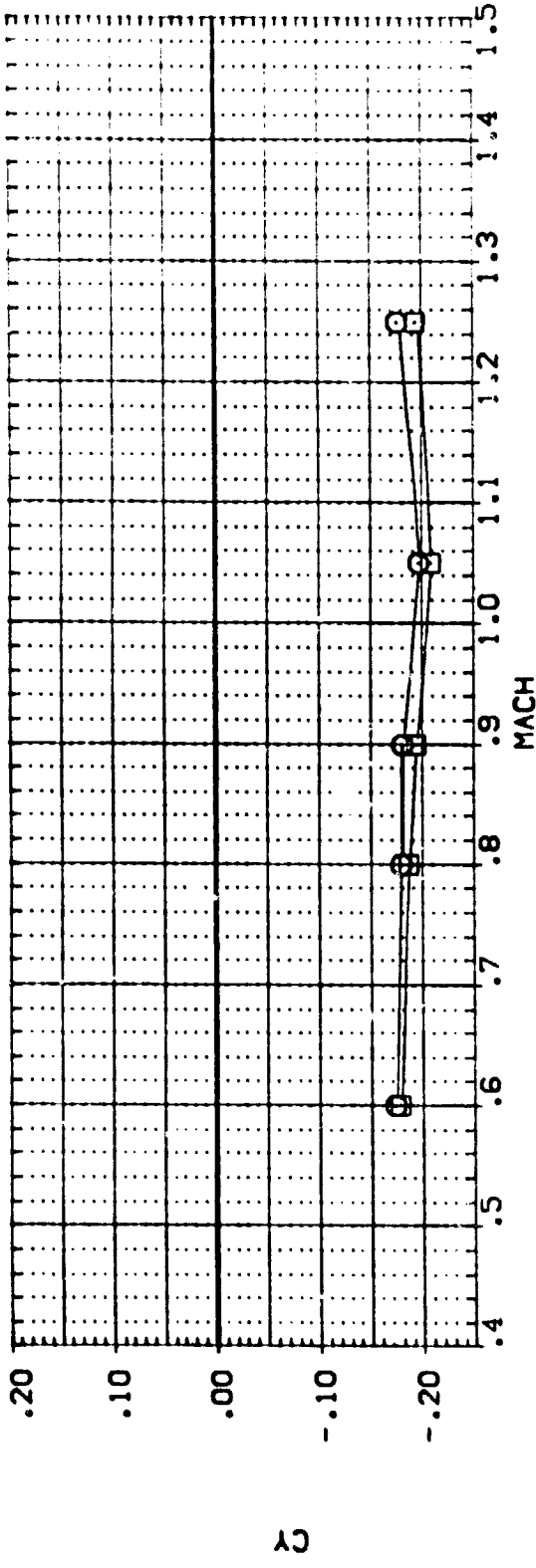
(B)BETA = .00

DATA SET SYMBOL: 0
 (080052)
 (080007)

CONFIGURATION DESCRIPTION
 HSC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) 0
 HSC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA: .000
 ORBITAL: .500
 DELTA Z: .140

REFERENCE INFORMATION
 SREF: 6.1990 50. IN
 LREF: 5.3130 IN
 BREF: 5.3130 IN
 XMRP: 2.5490 IN
 YMRP: .0000 IN
 ZMRP: .0000 IN
 SCALE: .0040



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

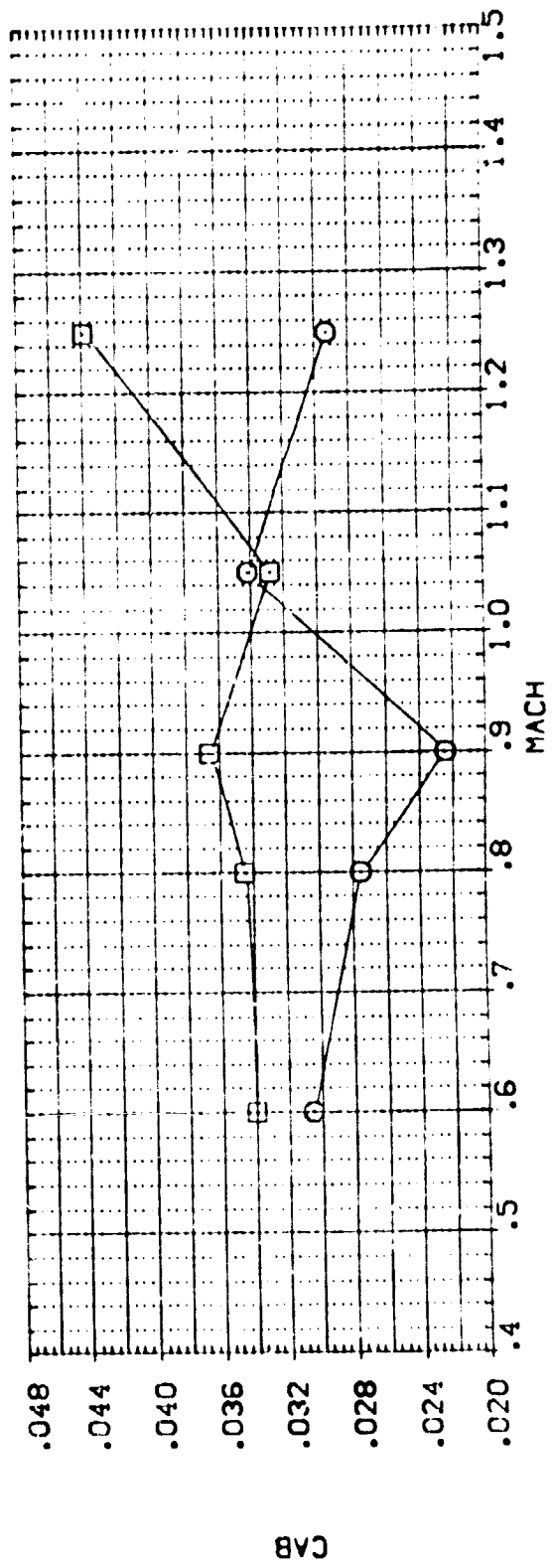
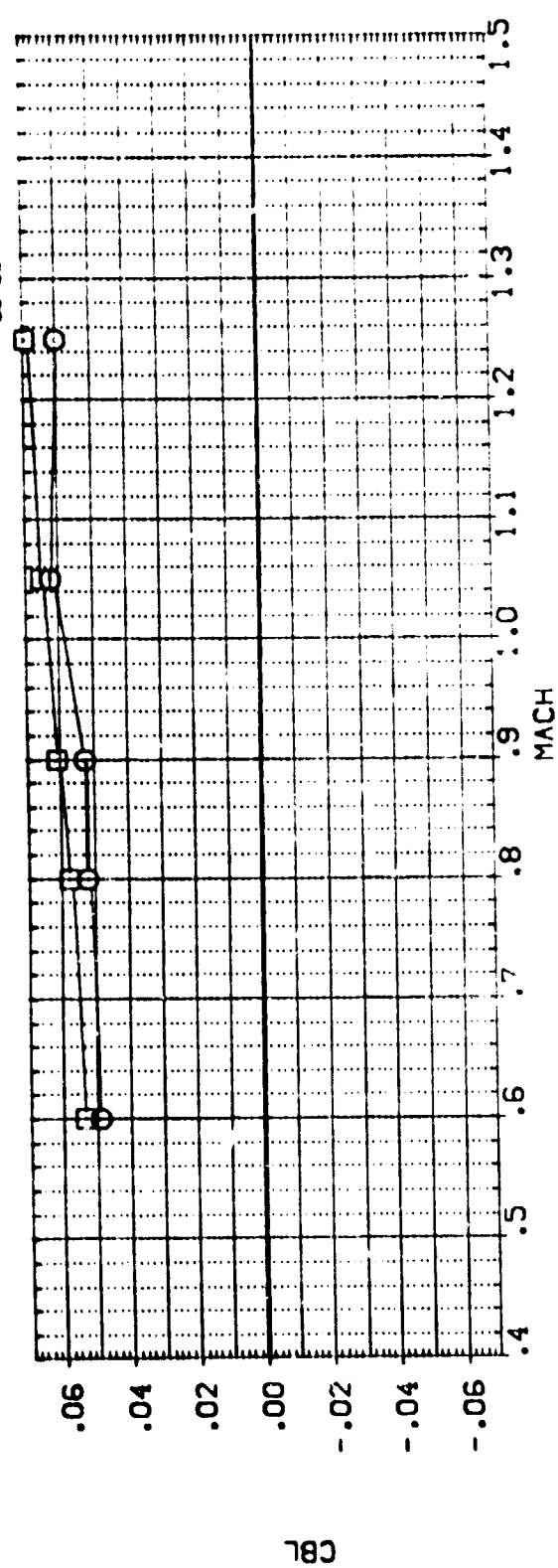
(C)BETA = 8.00

DATA SET SYMBOL: 8
 (640062)
 (660007)

CONFIGURATION DESCRIPTION
 NSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2) G
 NSFC 570(1A31F)(03)/(T9)/(S3/2)/(S3/2)

ALPHA ORBITING DELTA Z
 .000 .500 .140
 .000 .500 .140

REFERENCE INFORMATION
 SREF 6.1900 SQ IN
 LREF 5.3130 N:
 BREF 5.3130 N:
 XMRP 2.5450 N:
 YMRP .0000 N:
 ZMRP .0000 N:
 SCALE .0010



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

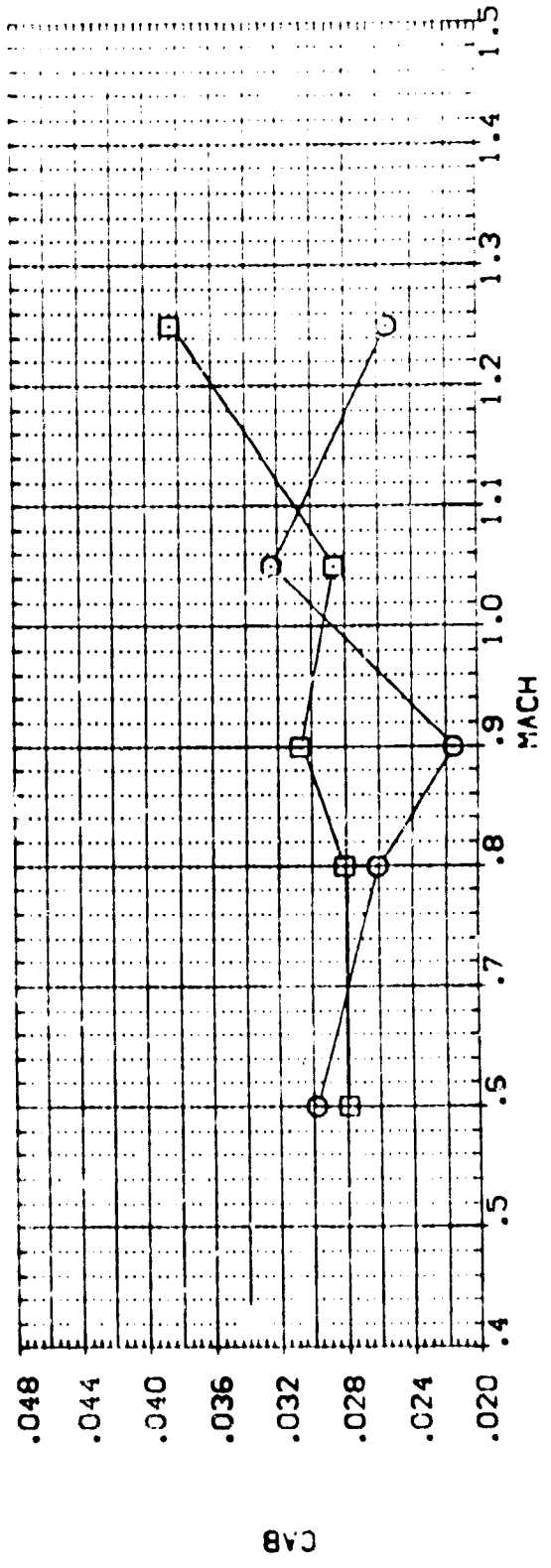
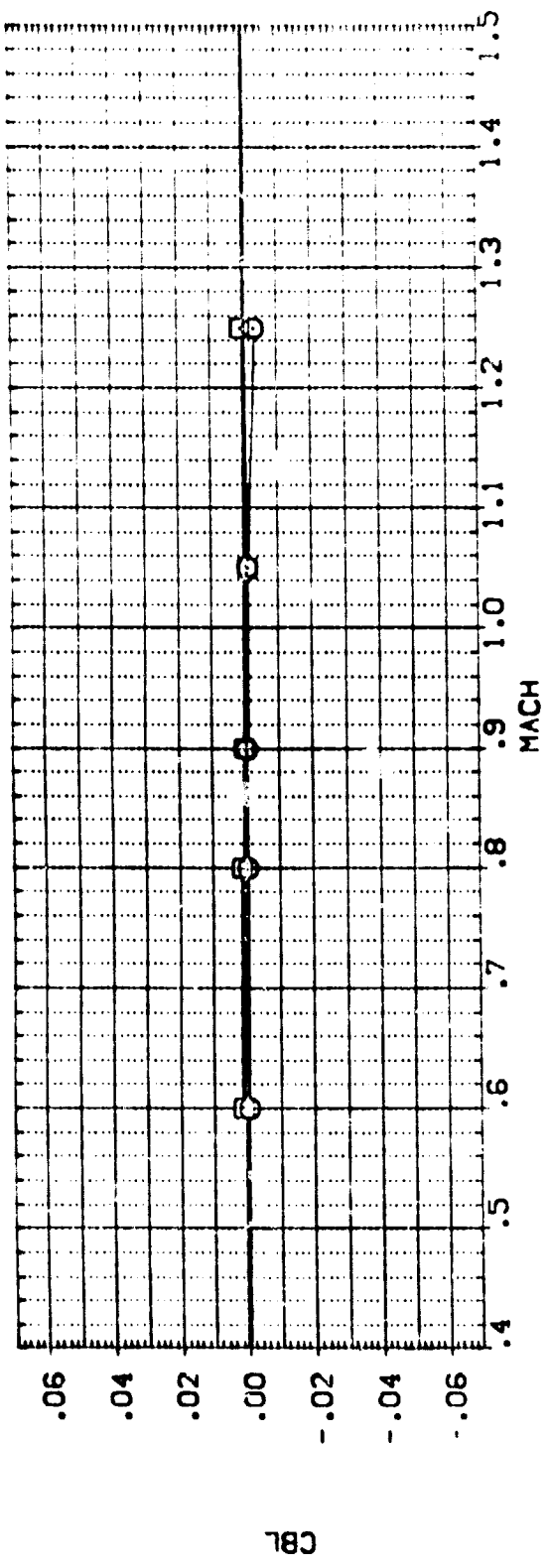
(A) BETA = -8.00

DATA SET SYMBOL: (063062) (063007)

CONFIGURATION DESCRIPTION:
 MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2) 6
 MSFC 570(IA3IF)(03)/(T9)/(S3/2)/(S3/2)

ALPHA: .000
 ORBITAL: .500
 DELTA Z: .140

REFERENCE INFORMATION:
 SREF: 6.1900
 LREF: 5.3100
 BREF: 5.3100
 XPROP: 2.5150
 YPROP: .0000
 ZPROP: .0000
 SCALE: .0010



GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/(T9)/(S3/2)/(S3/2)

(S)BETA = .00

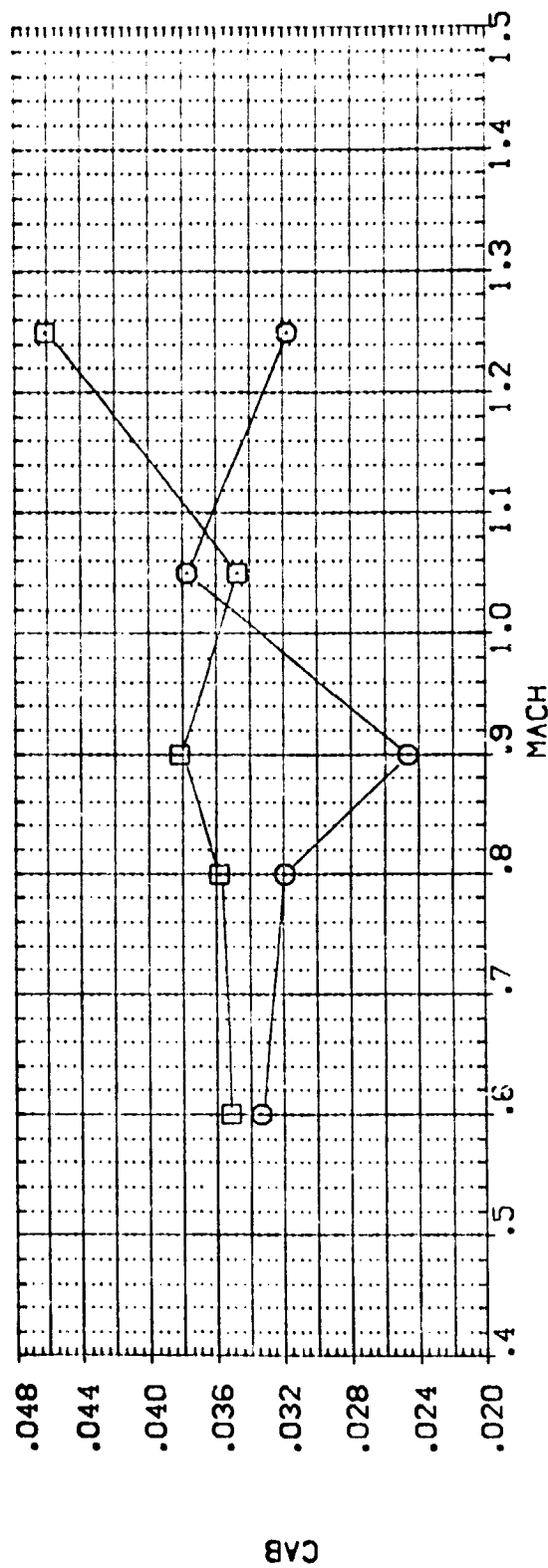
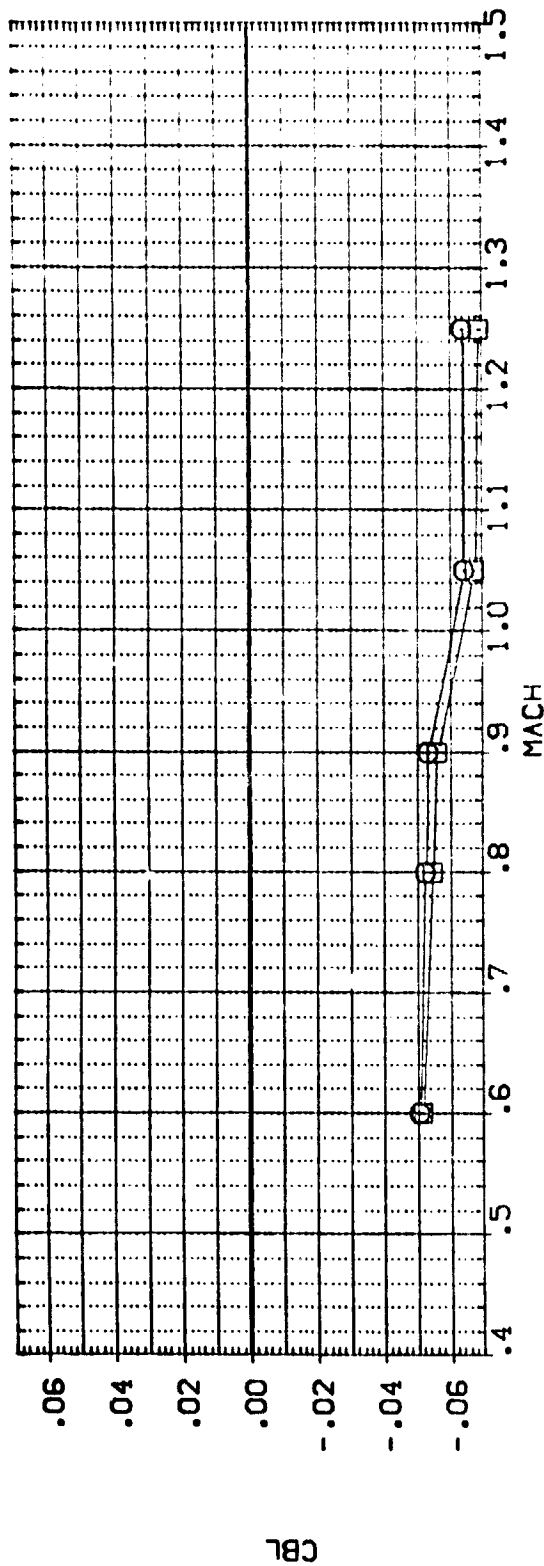
DATA SET SYMBOL: ☐ MSFC 570((A31F)((031)/(T9))((S3/2)/(S3/2)) 8
 (883007) MSFC 570((A31F)((031)/(T9))((S3/2)/(S3/2))

CONFIGURATION DESCRIPTION

REFERENCE INFORMATION

PARAMETER	VALUE	UNIT
SREF	6.1980	IN
LREF	5.313	IN
BREF	5.313	IN
XMRP	2.5480	IN
YMRP	.0000	IN
ZMRP	.0000	IN
SCALE	.0010	IN

ALPHA: .000 ORBITAL: .500 DELTA Z: .140



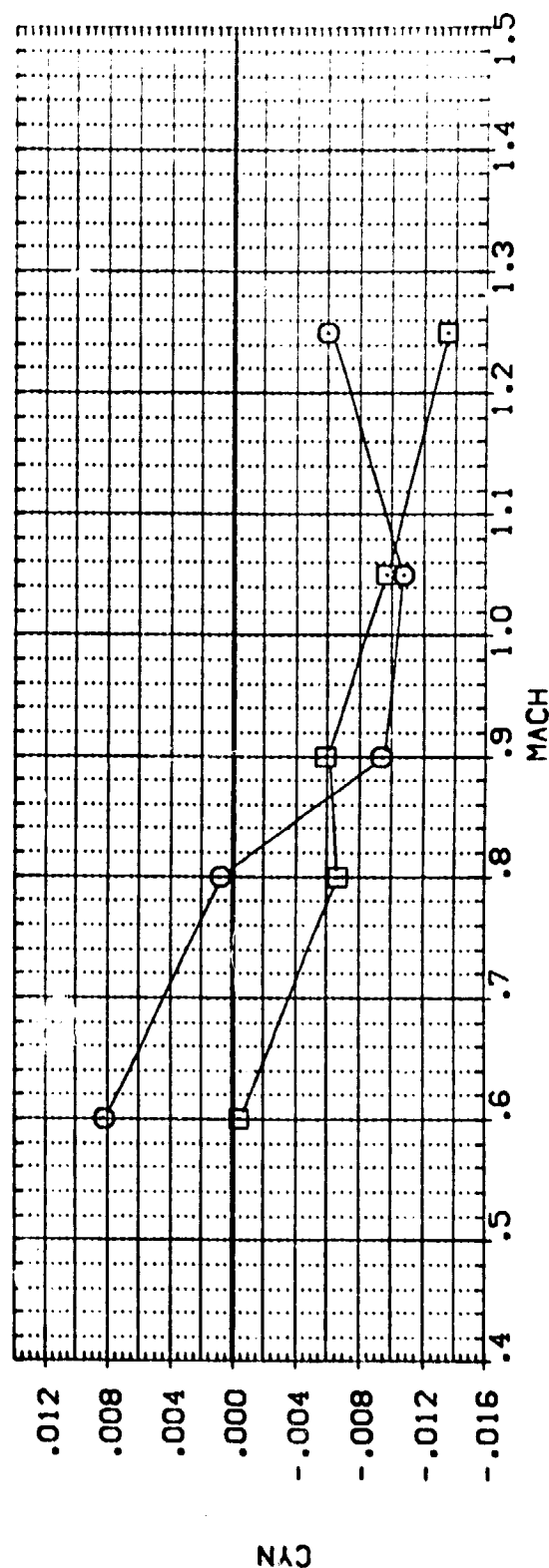
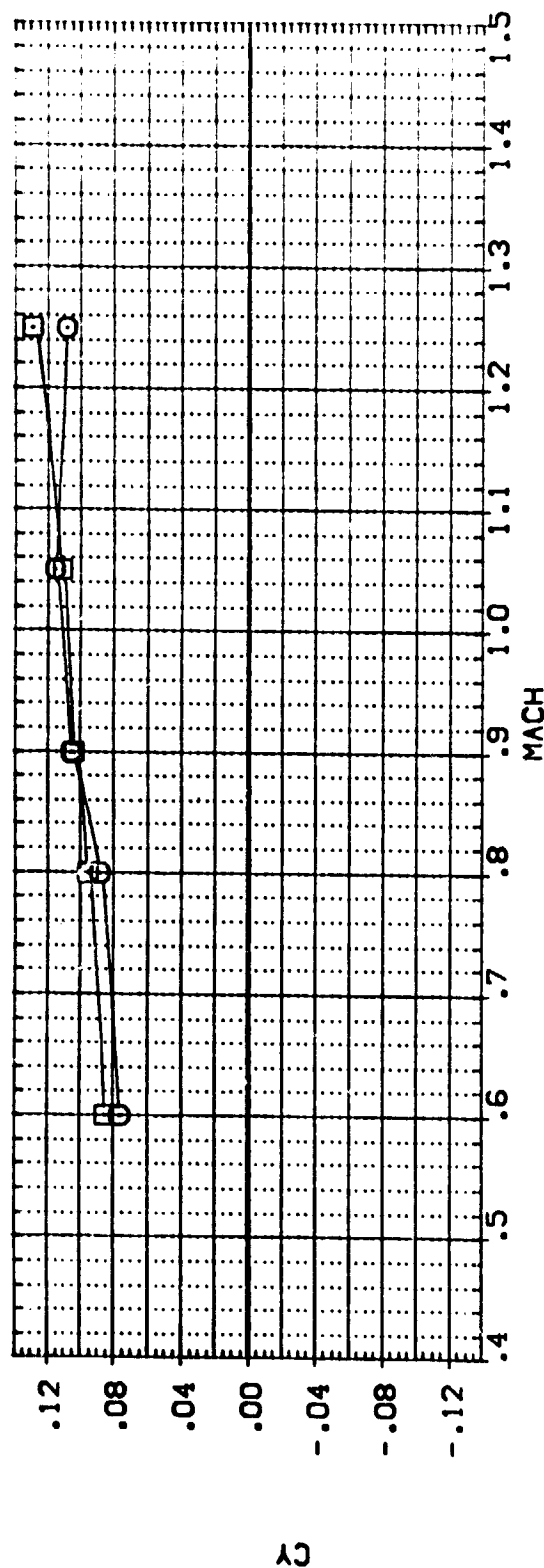
GRIT EFFECTS ON ORBITER AERODYNAMICS (03)/((T9))/((S3/2))/((S3/2))

(C)BETA = 8.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (003162) ☐ MSFC 5701(A31F) (T9)/(03)/(S3/2) 0
 (003107) ☐ MSFC 5701(A31F) (T9)/(03)/(S3/2) 1

ALPHA ORBINC DELTAZ
 .000 .500 .140
 .000 .500 .140

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 XMRP 2.5400 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

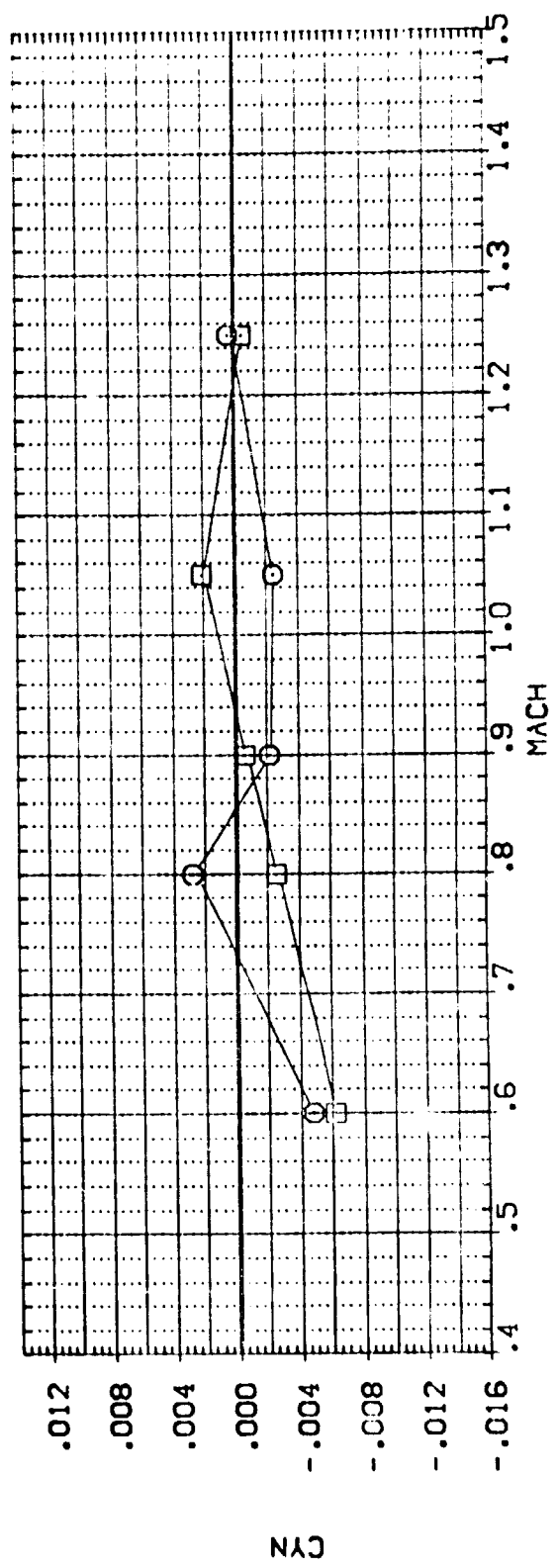
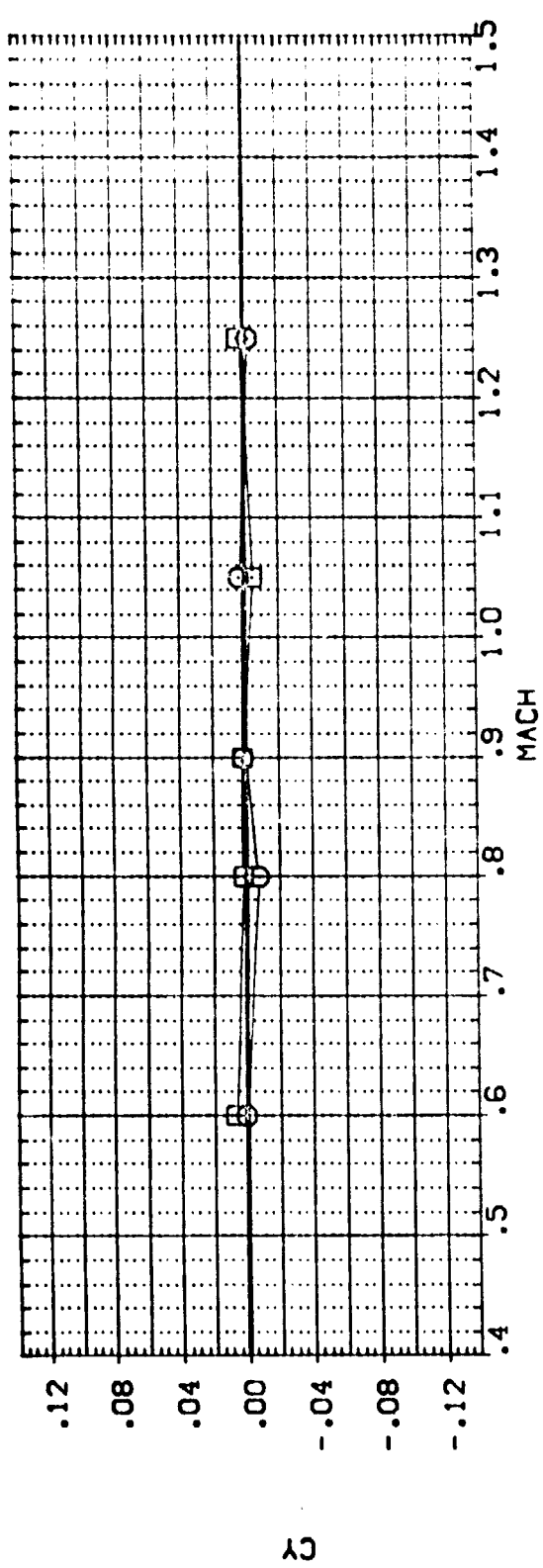
(ALBETA = -8.00

DATA SET SYMBOL
(083162)
(083107)

CONFIGURATION DESCRIPTION
MSFC 570(IA3IF) (T9)/(03)/(S3/2) 0
MSFC 570(IA3IF) (T9)/(03)/(S3/2)/(S3/2)

REFERENCE INFORMATION
SREF 6.1900 SQ. IN.
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5490 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0040

ALPHA .000
ORBIT .500
DELTAZ .140



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

(B)BETA = .00

DATA SET SYMBOL

083162

083107

8

CONFIGURATION DESCRIPTION

MSFC 570(1A31F) (T9)/(03)/(S3/2) 0

MSFC 570(1A31F) (T9)/(03)/(S3/2)/(S3/2)

ALPHA

0.000

ORBITAL

0.500

DELTA Z

0.140

REFERENCE INFORMATION

SREF

5.1980

IN.

LREF

5.3130

IN.

BREF

5.3130

IN.

XMRP

2.5457

IN.

YMRP

0.0000

IN.

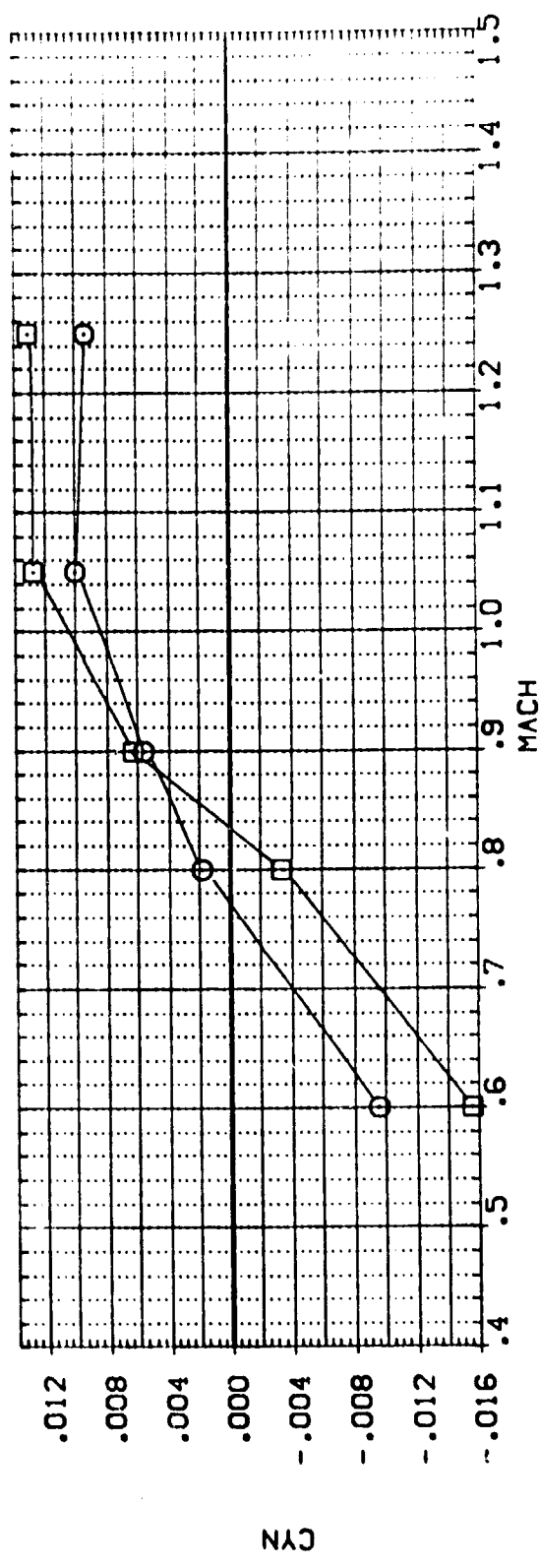
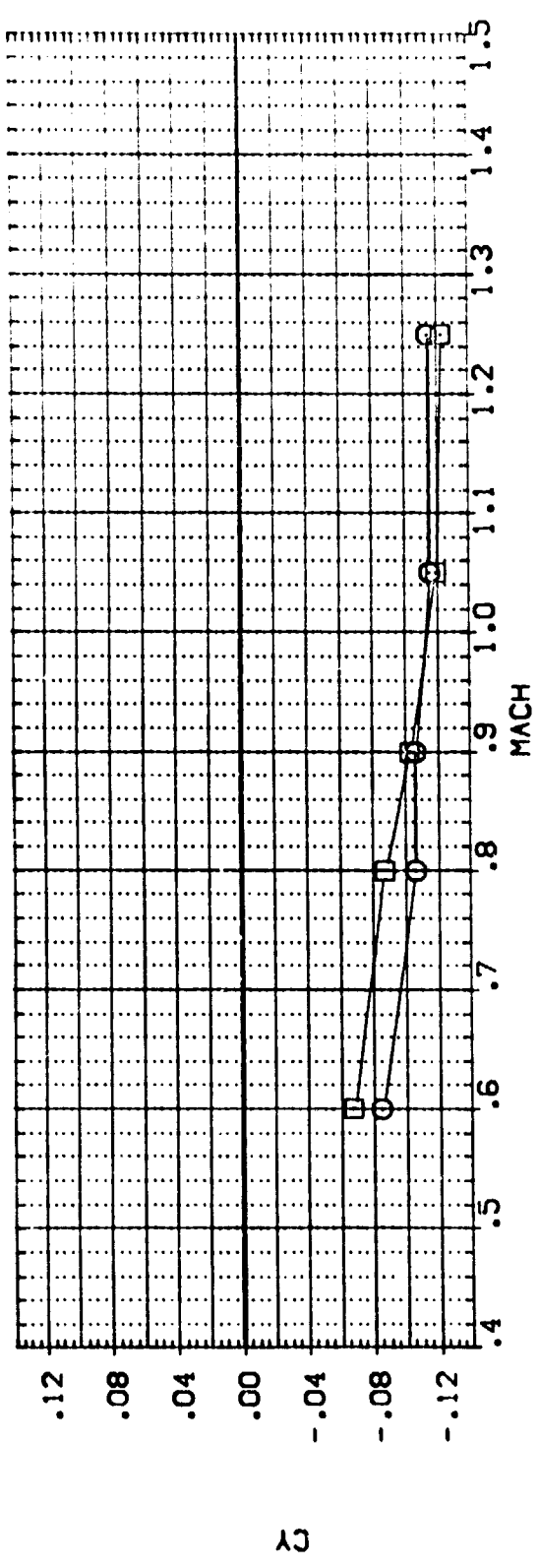
ZMRP

0.0000

IN.

SCALE

0.0010



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

(C)BETA = 8.00

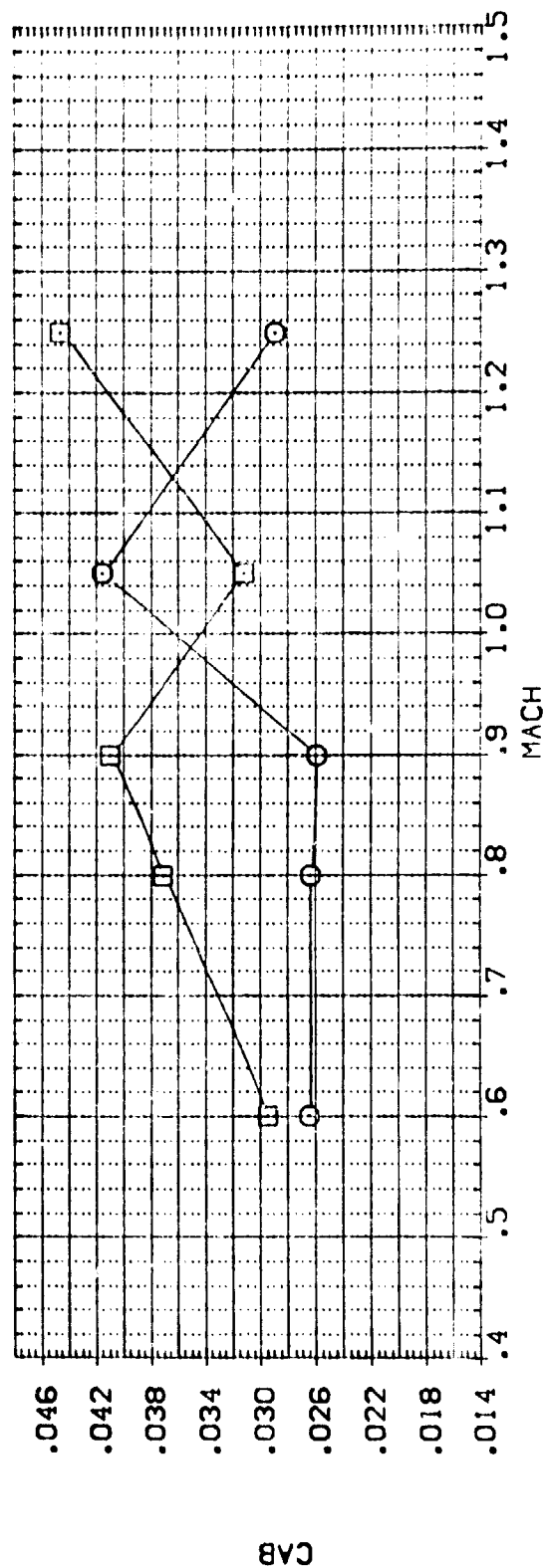
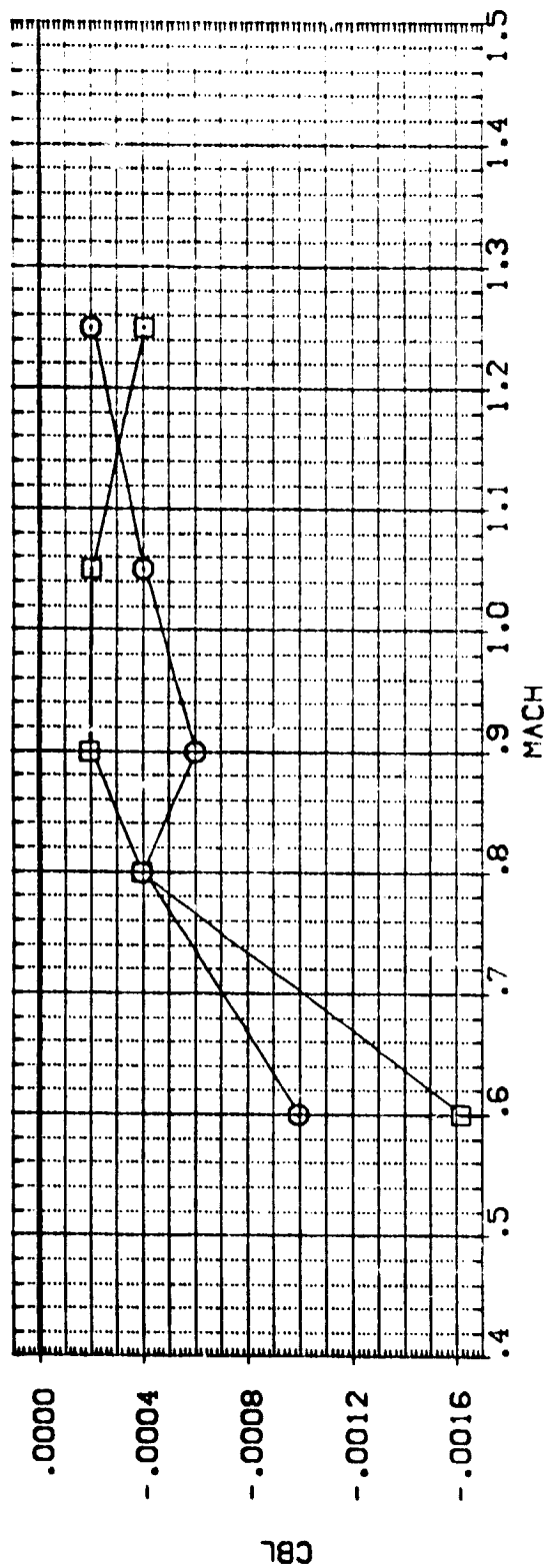
DATA SET SYMBOL: (003162)
 (003107)

CONFIGURATION DESCRIPTION

MSFC 570(1A31F) (T9)/(03)/(S3/2)/(S3/2) G
 MSFC 570(1A31F) (T9)/(03)/(S3/2)/(S3/2)

ALPHA: .000
 ORBINC: .500
 DELTAZ: .140

REFERENCE INFORMATION
 SREF: 6.1980 SQ. IN.
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0040



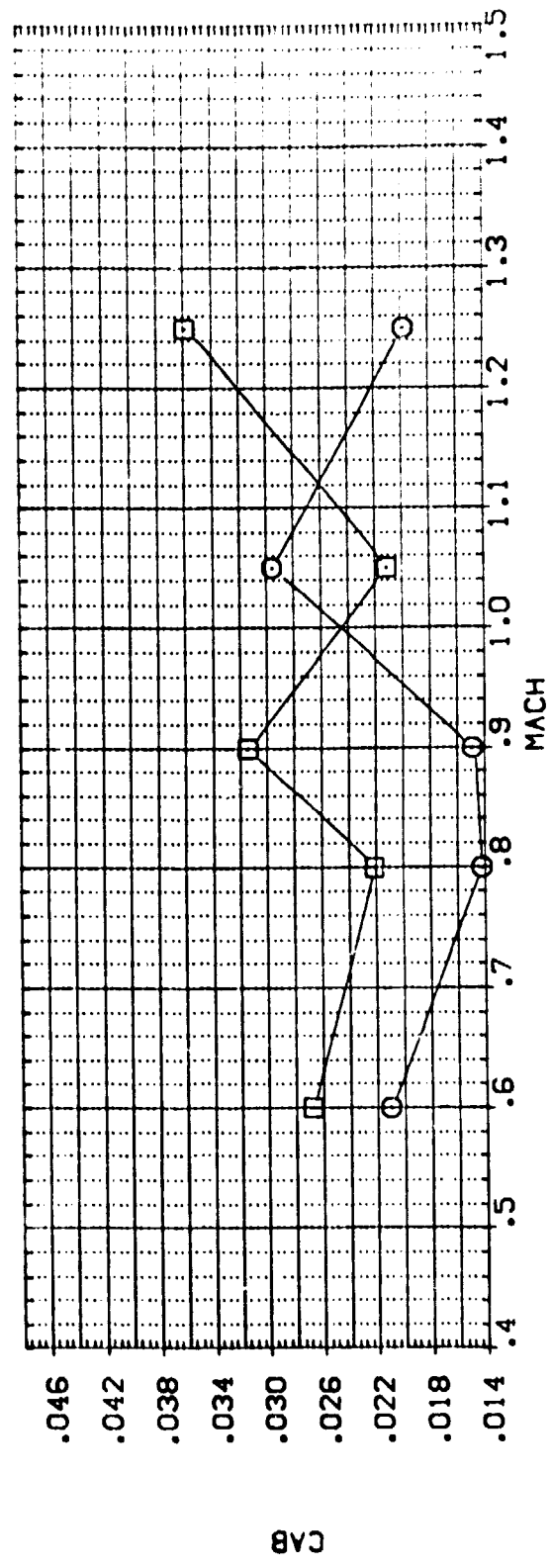
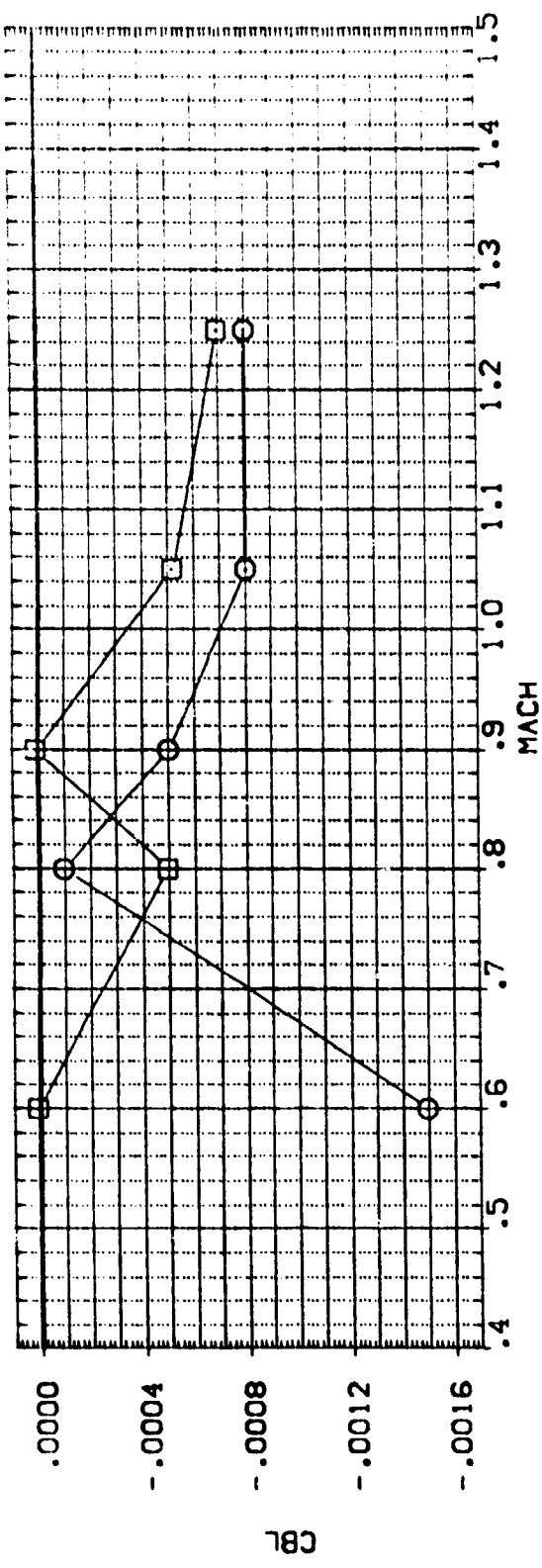
GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

(A)BETA = -8.00

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3:30
 BREF 5.3:30
 XREF 2.5450
 YREF .0000
 ZREF .0000
 SCALE .0010

ALPHA .000
 ORBINC .500
 DELTAZ .140

DATA SET SYMBOL (003T07)
 CONFIGURATION DESCRIPTION MSFC 570(IASIF) (T9)/(03)/(S3/2)/(S3/2) 0
 MSFC 570(IASIF) (T9)/(03)/(S3/2)/(S3/2)



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(03)/(S3/2)/(S3/2)

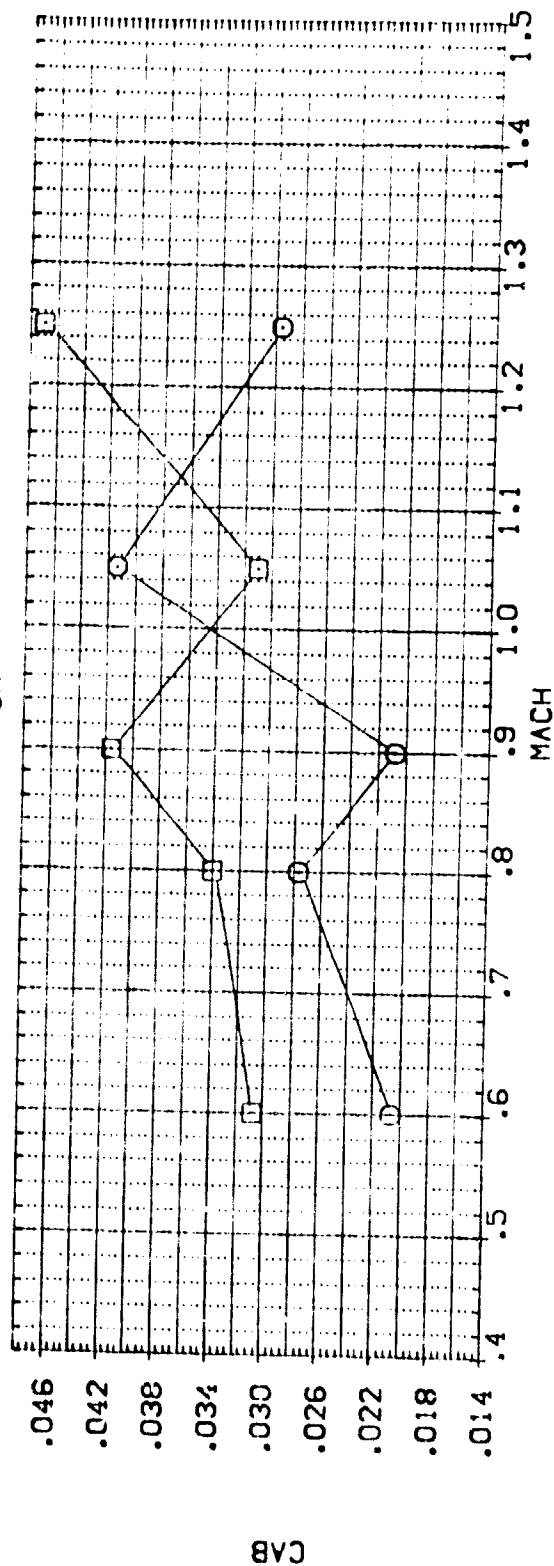
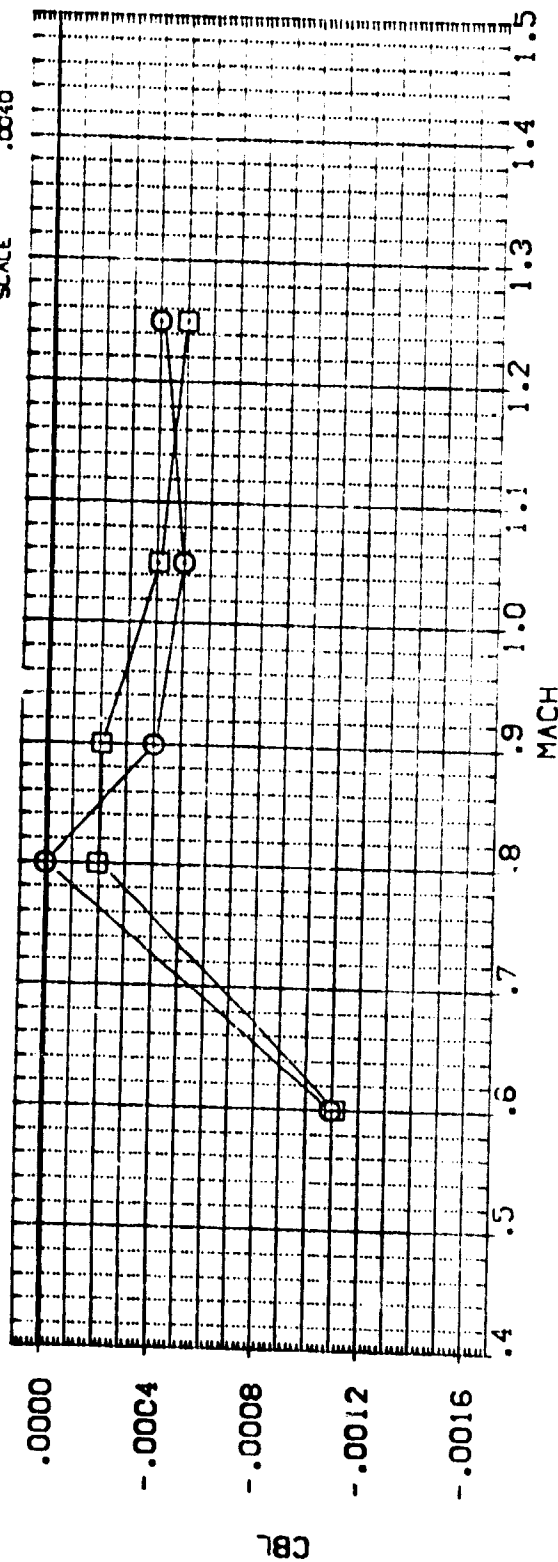
(B)BETA = .00

DATA SET SYMBOL: (G83162) (G83107)

CONFIGURATION DESCRIPTION:
 MSFC 570(IA3IF) (T9)/(O3)/(S3/2) 0
 MSFC 570(IA3IF) (T9)/(O3)/(S3/2)/(S3/2)

ALPHA: .000
 ORBINC: .500
 DELTAZ: .140

REFERENCE INFORMATION:
 SREF: 6.1980 SQ. IN.
 LREF: 5.3130 IN.
 BREF: 5.3130 IN.
 XMRP: 2.5490 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: .0010



GRIT EFFECTS ON EXTERNAL TANK AERODYNAMICS (T9)/(O3)/(S3/2)/(S3/2)

(C)BETA = 8.00

DATA SET SYMBOL: (G8352) (G8357) (G8358)

CONFIGURATION DESCRIPTION: MSFC 570 (A31F) (S3/2)/(03)/(T9)/(S3/2) 0 MSFC 570 (A31F) (S3/2)/(03)/(T9)/(S3/2)

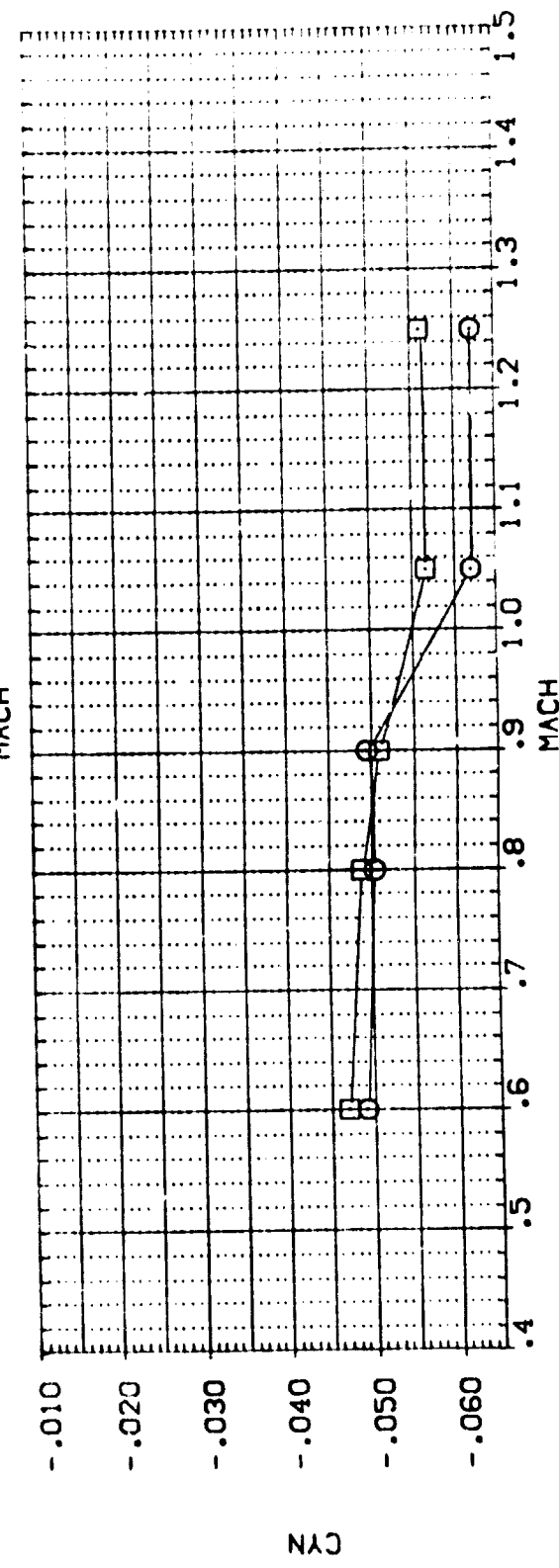
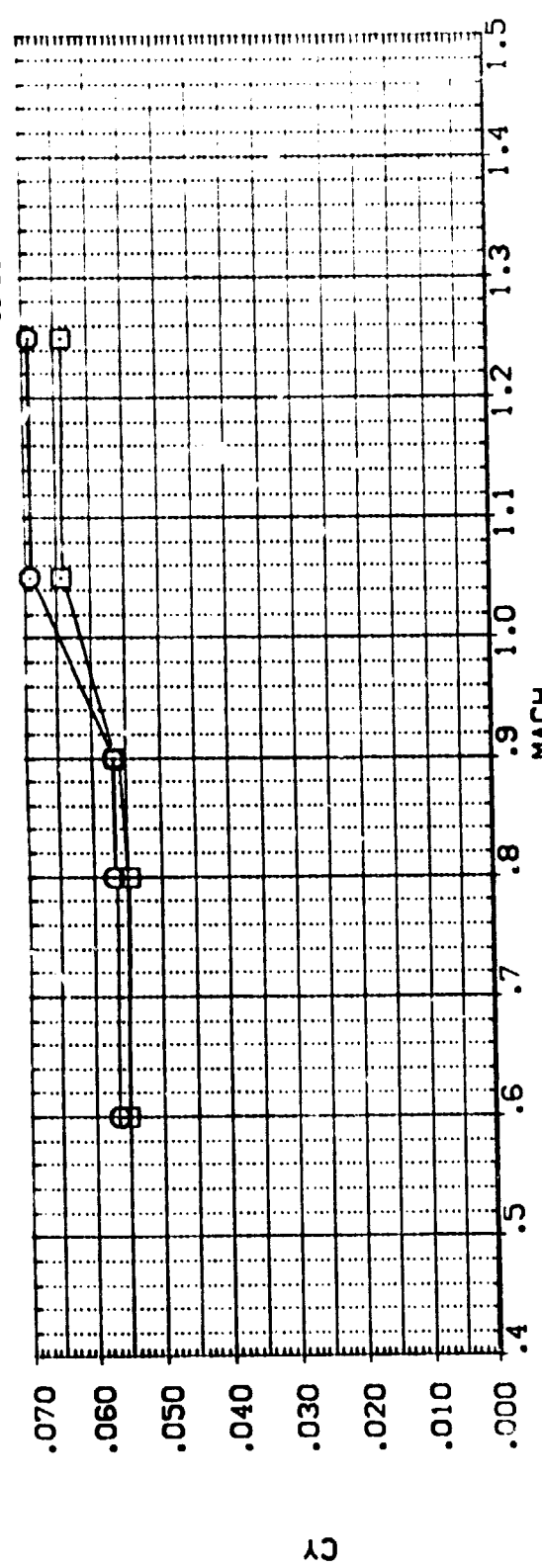
REFERENCE INFORMATION:

SREF	9720	SC	2
LREF	53130		
BREF	53130		
YMRP	2.5490		
ZMRP	.0000		
SCALE	.0040		

ALPHA: .000

ORBIT: .500

DELTA Z: .140



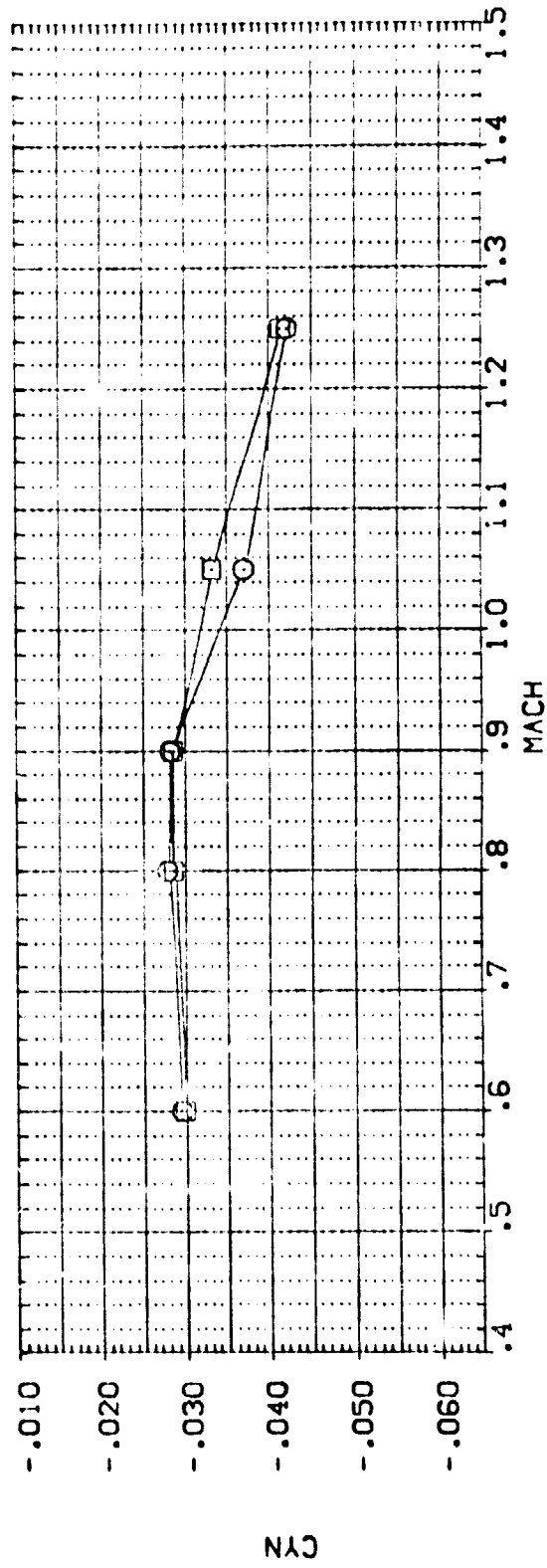
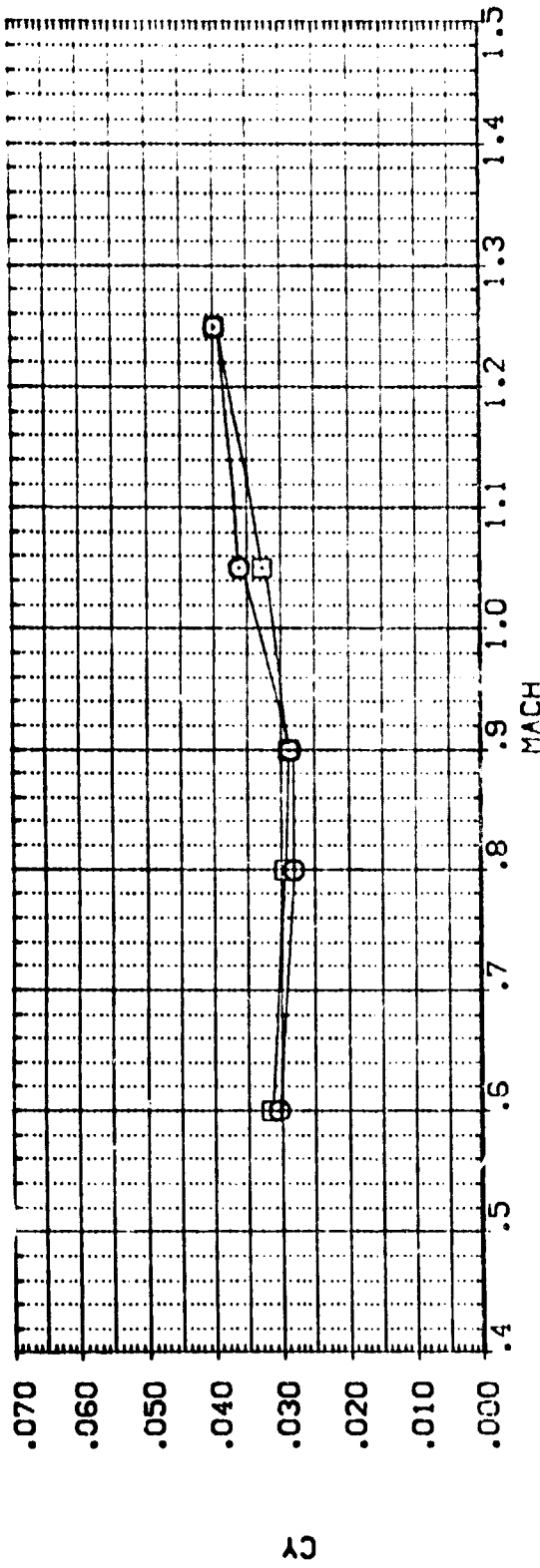
GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

(A) BETA = -8.00

DATA SET SYMBOL: (083562) (083507) CONFIGURATION DESCRIPTION: MSFC 570(1A31F) (S3/2)/(03)/(19)/(S3/2) 0 MSFC 570(1A31F) (S3/2)/(03)/(19)/(S3/2)

ALPHA: .000 ORBITAL DELTA Z: .140

REFERENCE INFORMATION: SREF: .9720 S3: IN LREF: 5.3130 IN: BREF: 5.3130 IN: XMRP: 2.5450 IN: YMRP: .0000 IN: ZMRP: .0000 IN: SCALE: .0040



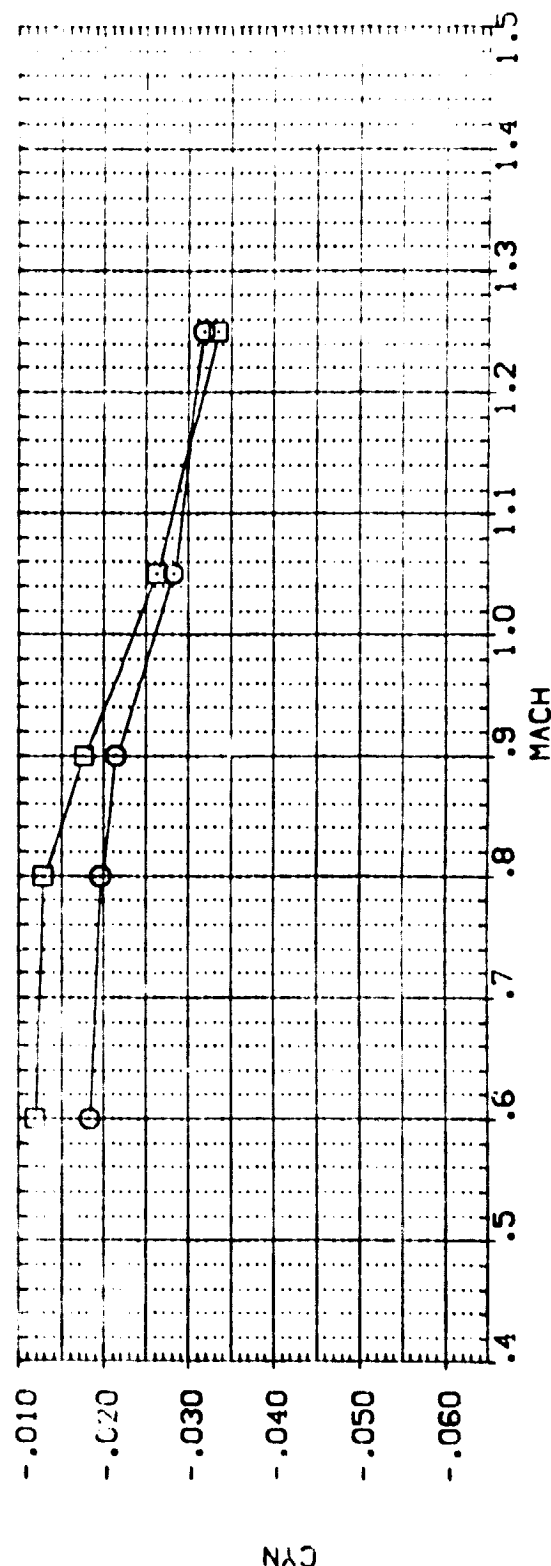
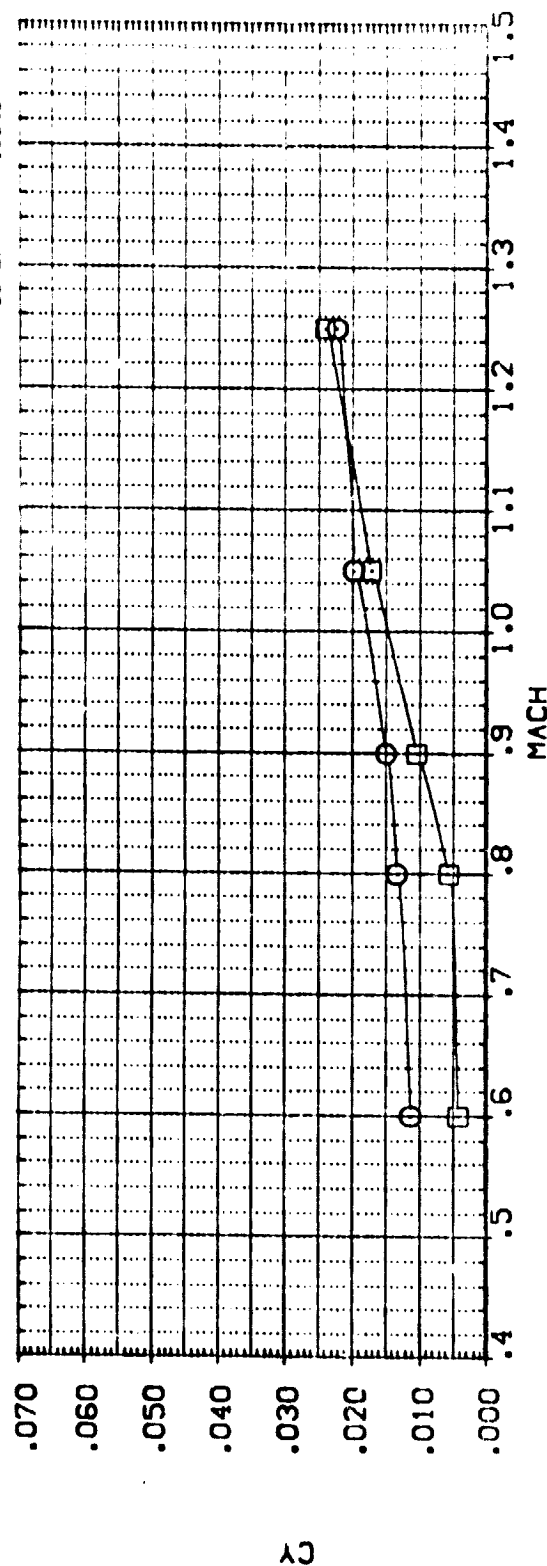
GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(19)/(S3/2)

(B)BETA = .00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (000052) □ MSFC 570(IA31F) (S3/2)/(03)/(T9)/(S3/2) 0
 (000007) □ MSFC 570(IA31F) (S3/2)/(03)/(T9)/(S3/2)

ALPHA DRBINC DELTAZ
 .000 .500 .140
 .000 .500 .140

REFERENCE INFORMATION
 SREF .9720 SQ IN
 LREF 5.3130 IN
 BREF 5.3130 IN
 YMRP 2.5490 IN
 YMRP .0000 IN
 ZMRP .0000 IN
 SCALE .0040



GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

(C)BETA = 8.00

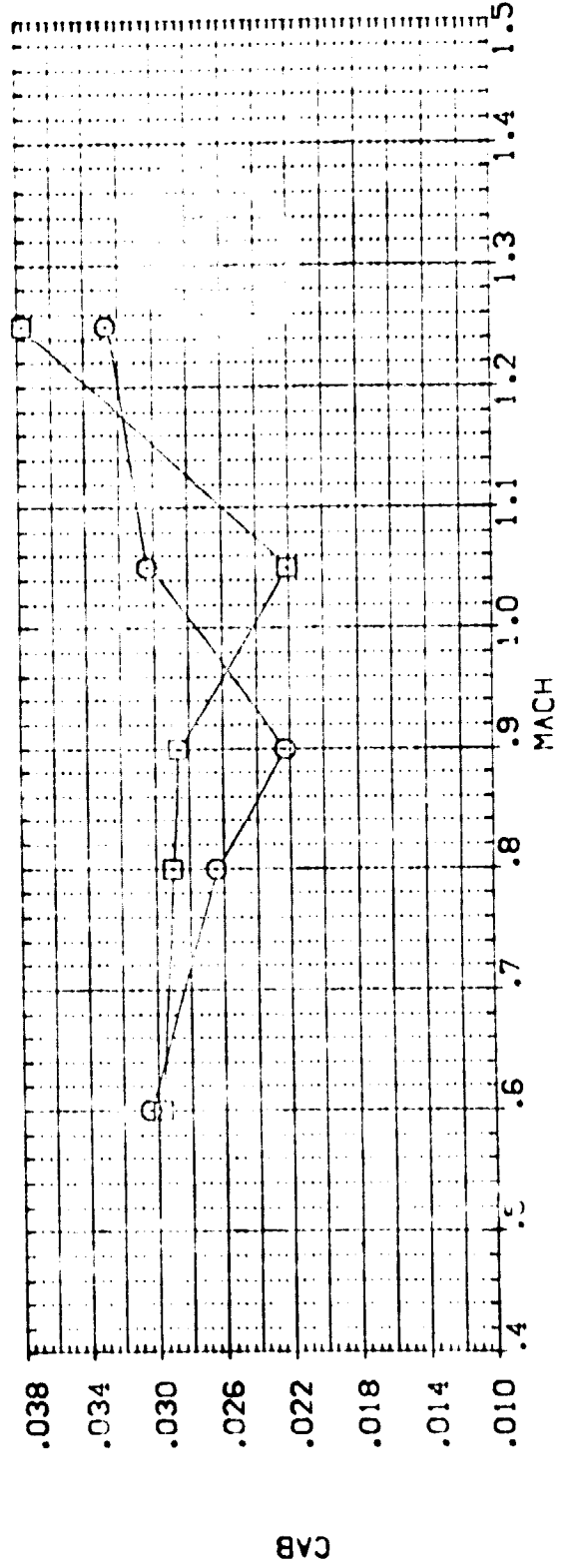
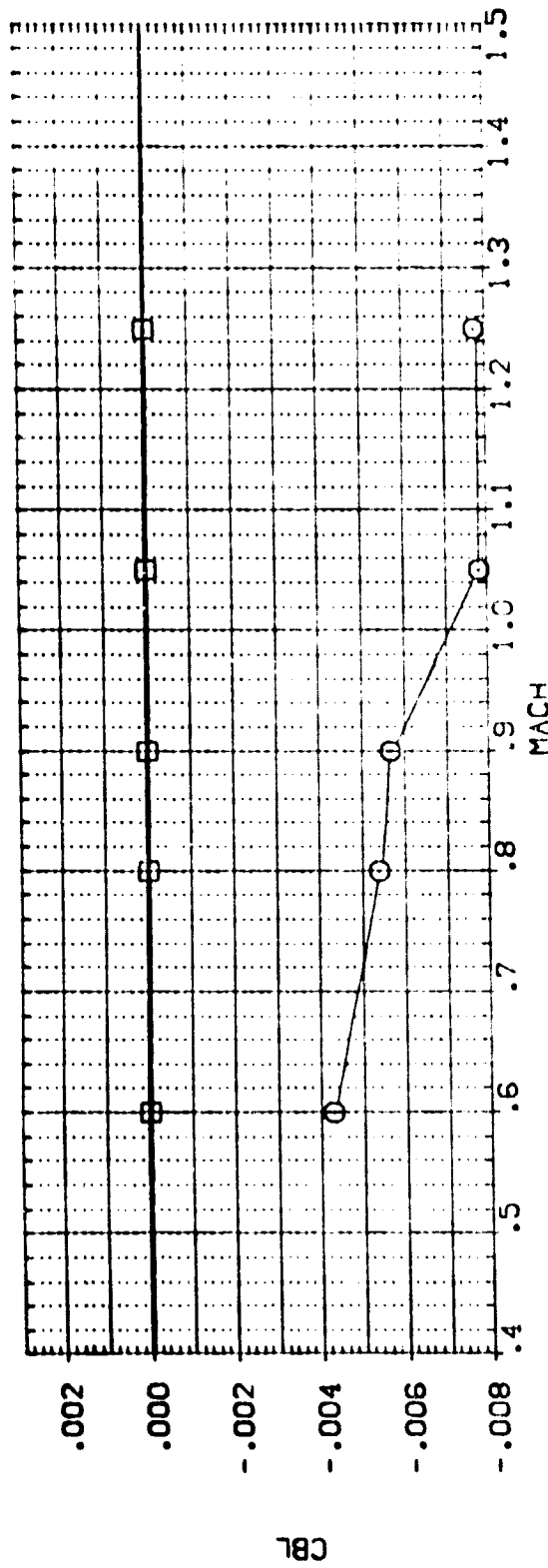
PAGE 610

DATA SET SYMBOL: ☐ (080562) ☐ (080507)

CONFIGURATION DESCRIPTION:
 MSFC 5701(A31F) (S3/2)/(03)/(T9)/(S3/2) 6
 MSFC 5701(A31F) (S3/2)/(03)/(T9)/(S3/2)

ALPHA: .000
 ORBITAL: .500
 DELTA Z: .140

REFERENCE INFORMATION:
 SREF: .9720 S3: 12
 LREF: 5.3130
 BREF: 5.3130
 XMRP: 2.5490
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0010



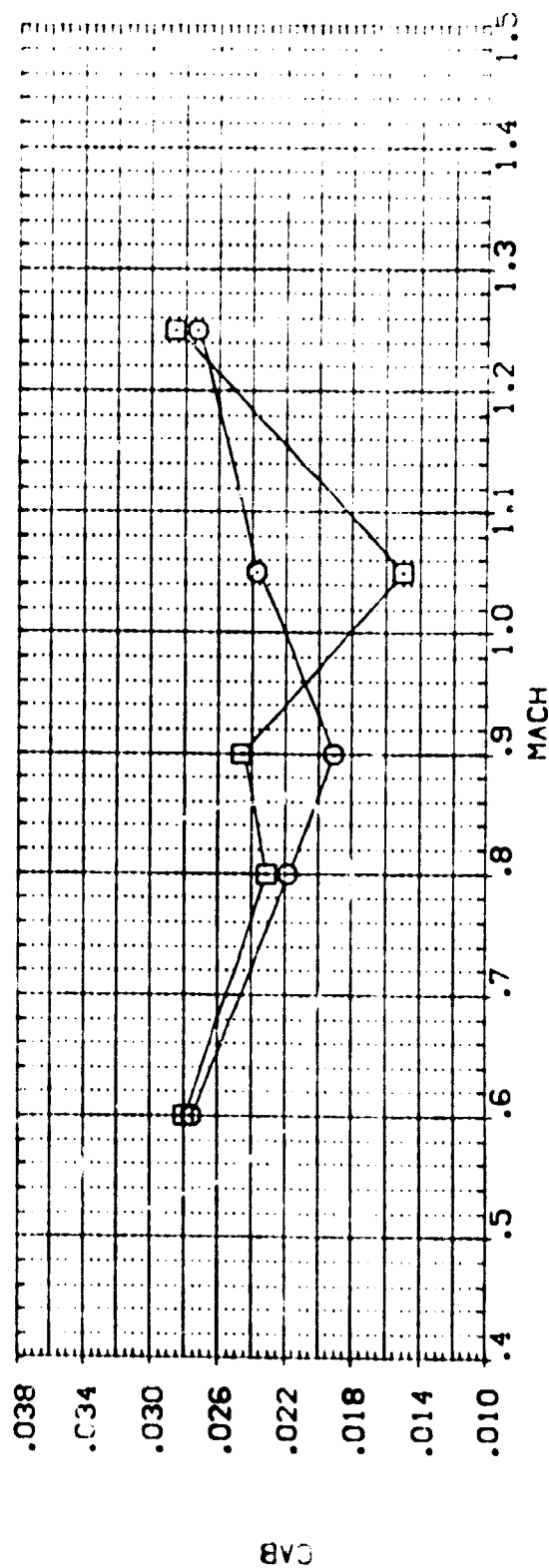
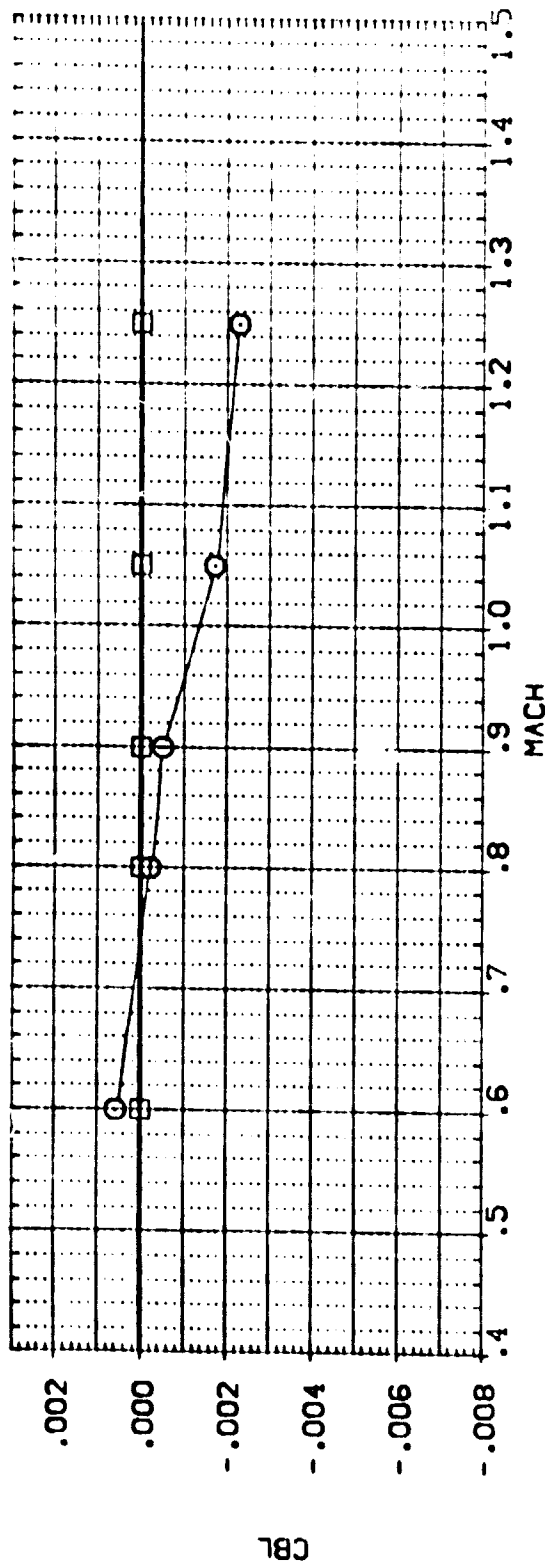
GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

(A)BETA = -8.00

DATA SET SYMBOL: ☐ (000562) ☐ (000567)
 CONFIGURATION DESCRIPTION:
 MSC 570(1A31F) (S3/2)/(03)/(19)/(S3/2) 0
 MSC 570(1A31F) (S3/2)/(03)/(19)/(S3/2)

ALPHA: .000
 ORB INC: .500
 DELTA Z: .140

REFERENCE INFORMATION:
 SREF: 9720 SQ: IN
 LREF: 5.3130 IN:
 BREF: 5.3130 IN:
 XMRP: 2.5450
 YMRP: .0000
 ZMRP: .0000
 SCALE: .0040



GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(19)/(S3/2)

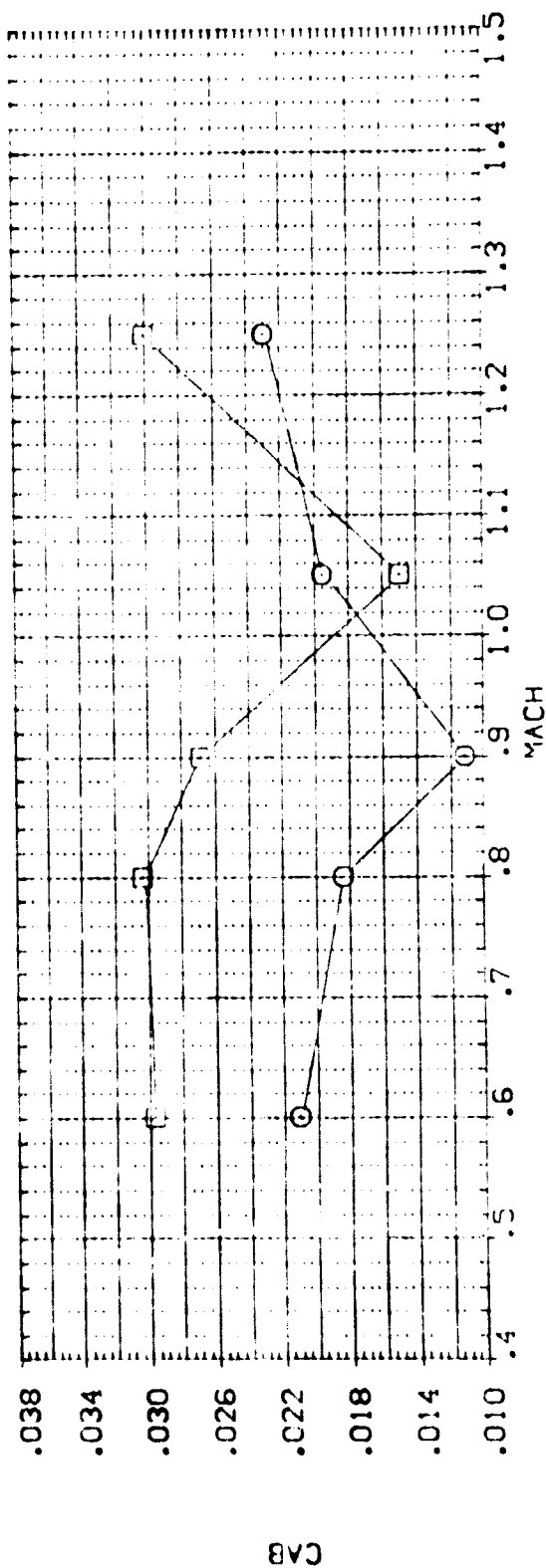
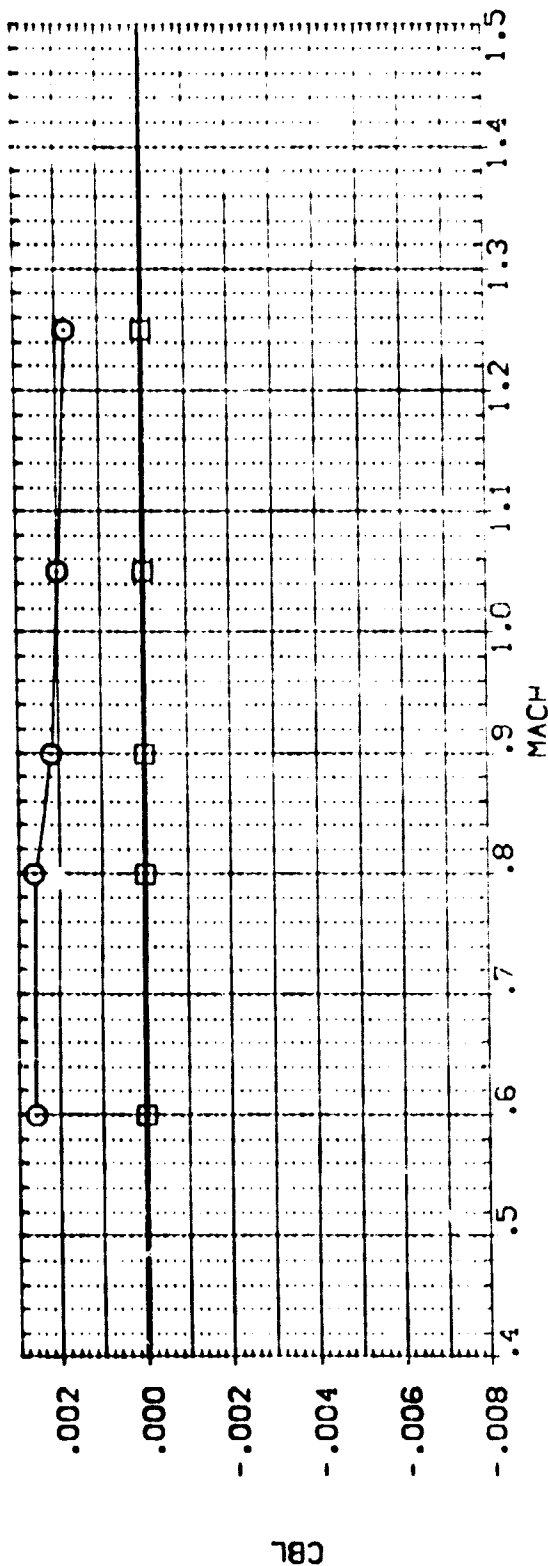
(B)BETA = .00

DATA SET SYMBOL: (080552) (080507)

CONFIGURATION DESCRIPTION:
 MSFC 570(IAGIF) (S3/2)/(03)/(T9)/(S3/2) 6
 MSFC 570(IAGIF) (S3/2)/(03)/(T9)/(S3/2)

REFERENCE INFORMATION:
 SREF .9720 SQ. IN.
 LREF 9.3130 IN.
 BREF 9.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0000

ALPHA .000
 ORBITAL .500
 DELTA Z .140



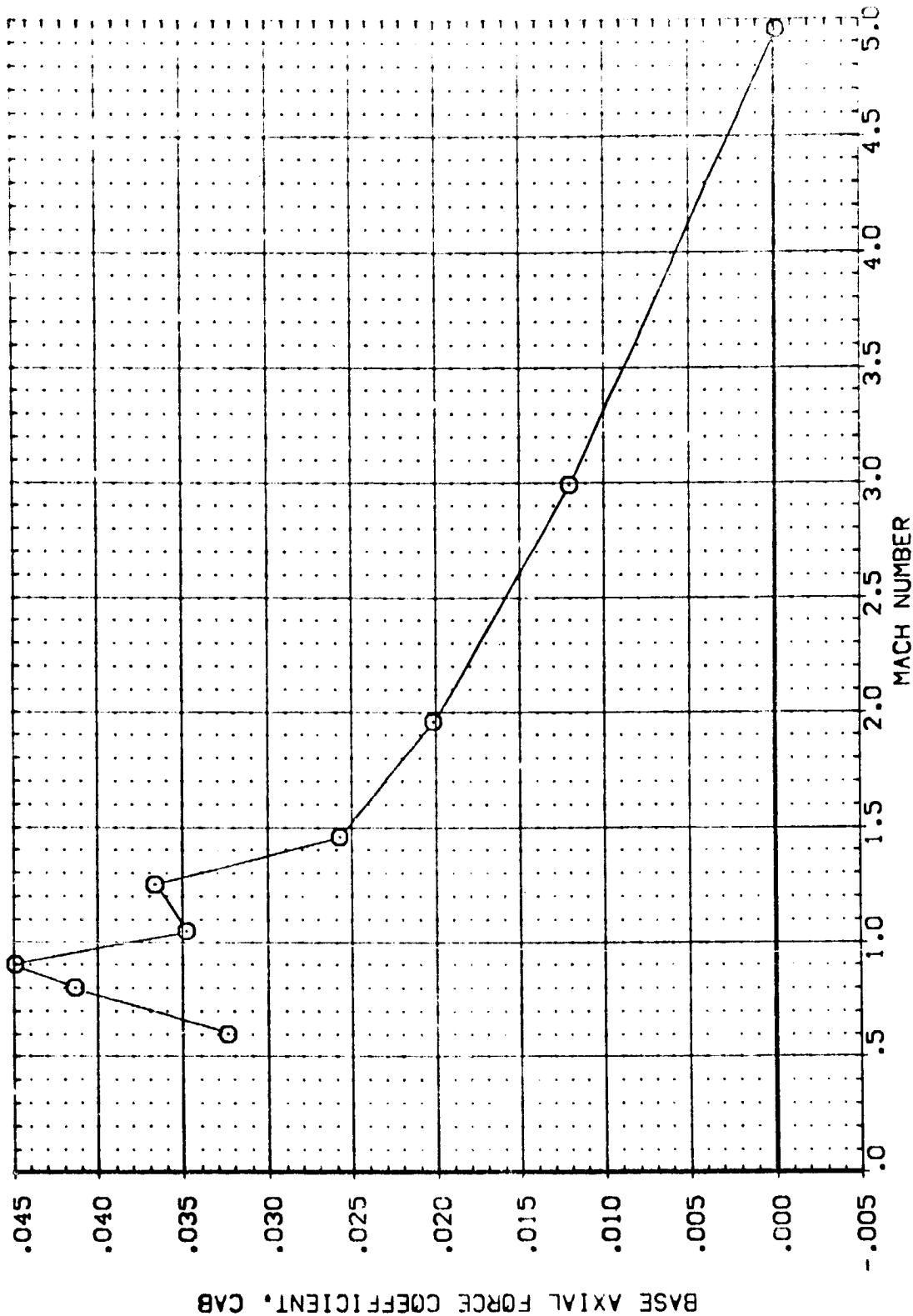
GRIT EFFECTS ON LEFT-SIDE SRB AERODYNAMICS (S3/2)/(03)/(T9)/(S3/2)

(C)BETA = 8.00

MSFC 570(IA31F) (T9)(S3/2)/(03)/(S3/2)

(G83T60)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES			REFERENCE INFORMATION		
0	.000	DELTA Z	.000	CONFIG	214.000	SREF	6.1980	SG
		X-SRB	.140	RUDDER	.000	LREF	5.3130	IN
		SPACER	.000	ORBINC	.500	X-TRP	5.3130	
		SPAGAP	.000	SPADIA	.000	Y-TRP	2.5450	
						Z-TRP	.0000	
						Z-TRP	.0000	
						SCALE	.0040	



TANK WITH METRIC SRB ON RIGHT SIDE

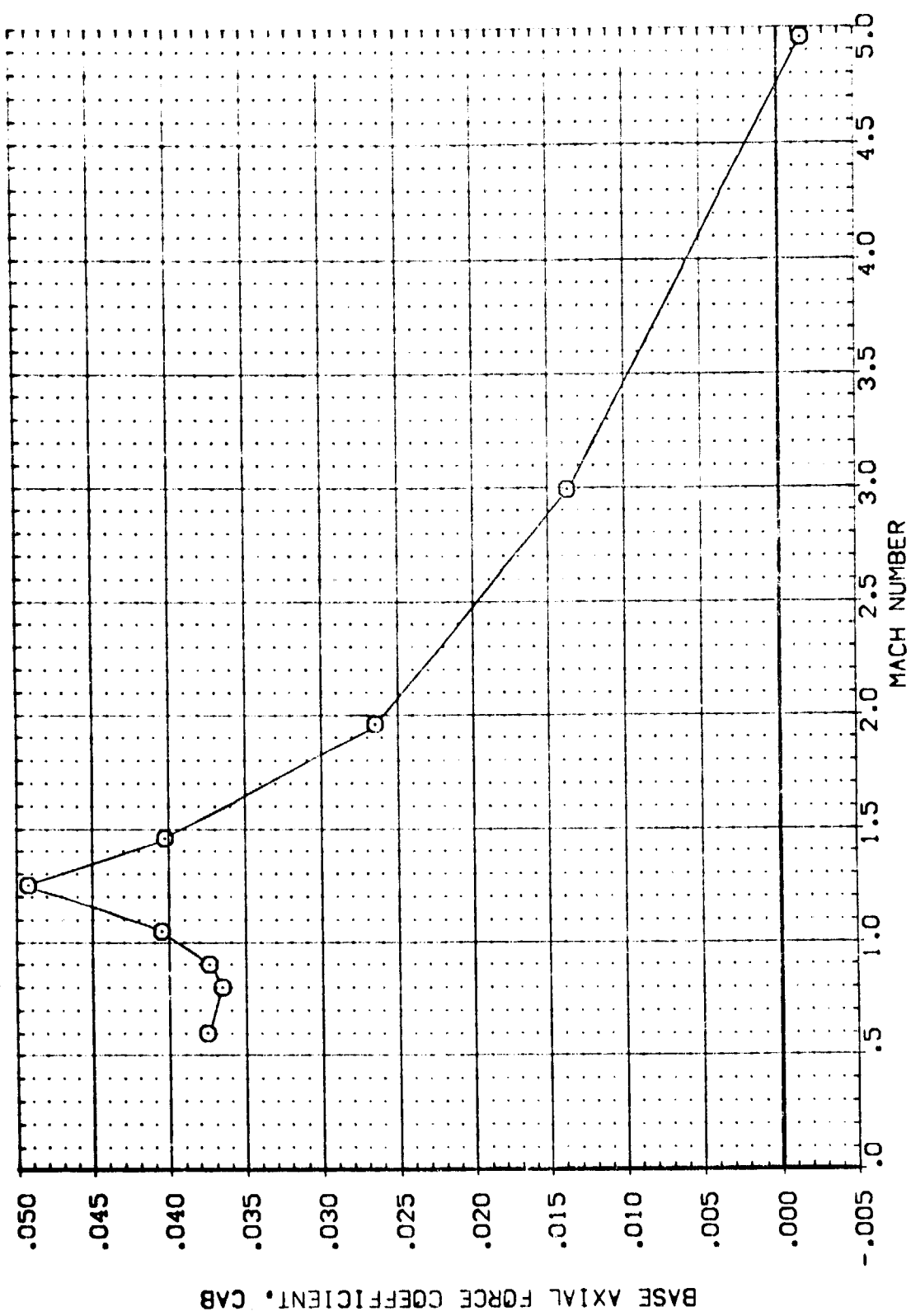
MSFC 570(1A31F) (S3/2)/(03)/(T9)(S3/2)

(G83560)

SYMBOL ALPHA BETA DELTAZ X-SRB SPACER SPAGAP

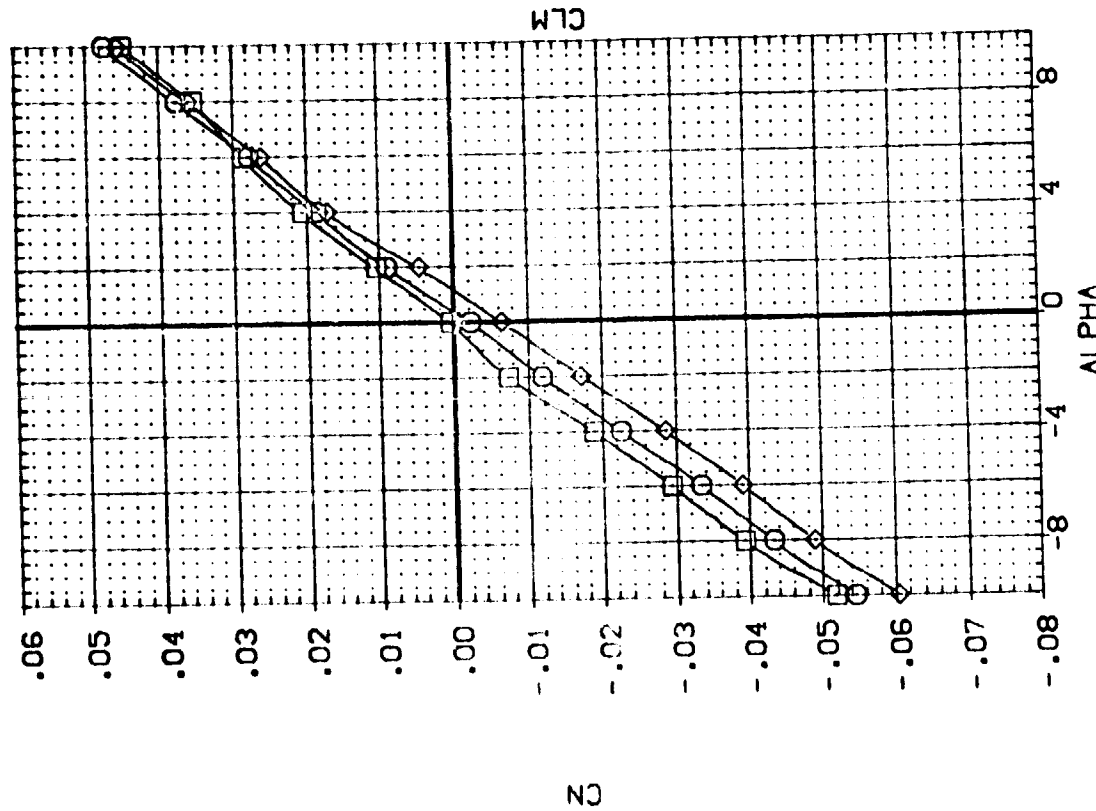
PARAMETRIC VALUES
 .000 .000 .140 .000 .000 .000
 CONFIG RUDDER ORBITAL SPADIA
 314.000 .000 .500 .000

REFERENCE INFORMATION
 SREF .9720
 LREF 5.3130
 BREF 5.3130
 XREF 2.5490
 YREF .0000
 ZREF .0000
 SCALE .0010



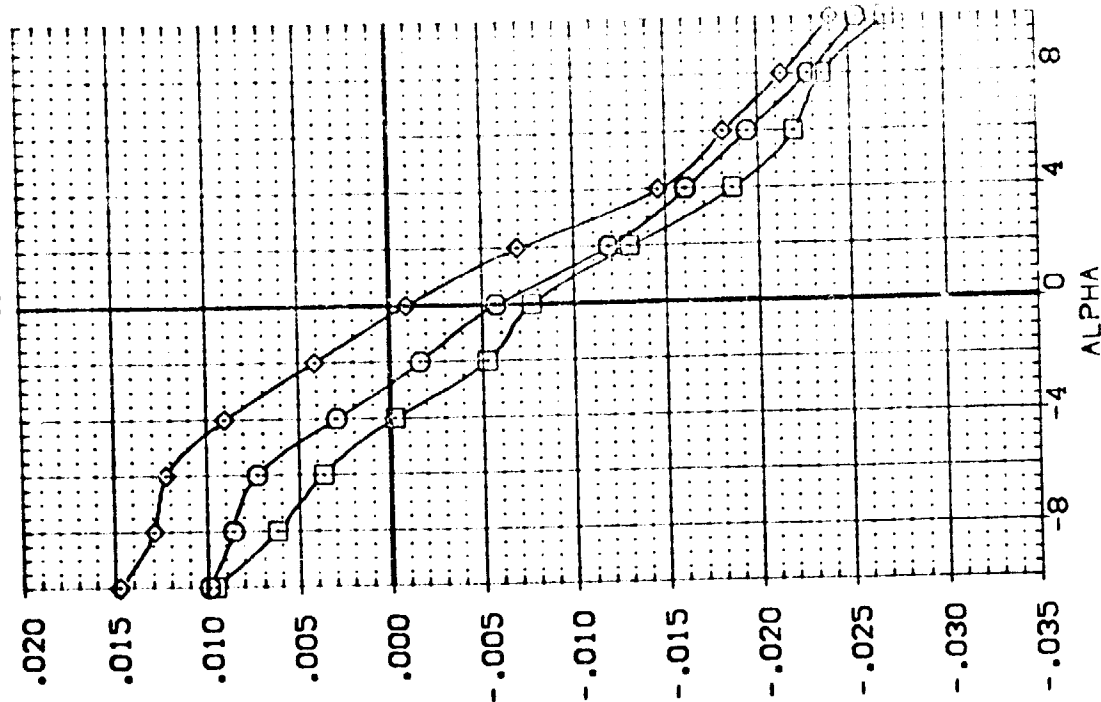
LEFT SIDE SRB BASE PRESSURE

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (+83602) MSFC 570(A31F)(S3/2)/(03)/(T9)/(S3/2)
 (083653) MSFC 570(A31F) (S3/2)/(03)/(T9)/(S3/2)
 (083665) MSFC 570(A31F) (S3/2)/(03)/(T9)/(S3/2)



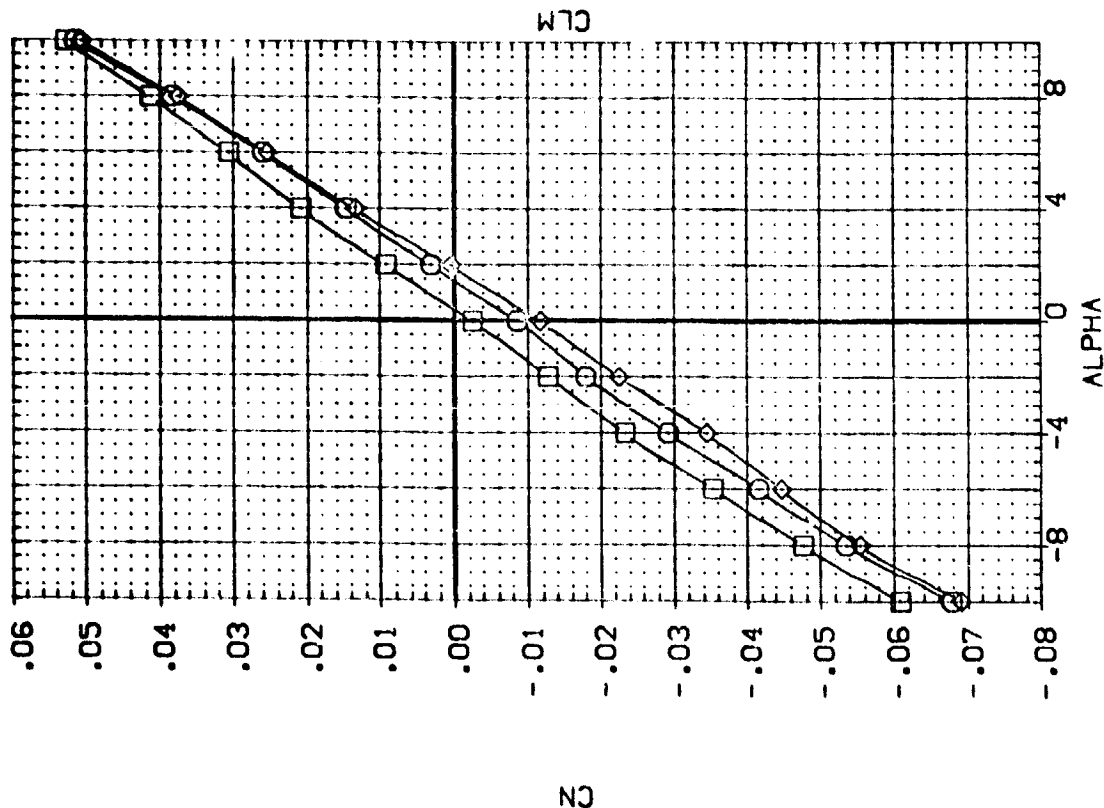
EFFECT OF ET STING ON LEFT-SIDE SRB
 (A)MACH = .90

ORBITING DELTA Z SPADIA SPAGAP REFERENCE INFORMATION
 .500 .140 .000 SREF 9720 SQ. IN.
 .500 .140 .000 LREF 5.313C IN.
 .500 .140 .000 BREF 5.313C IN.
 .500 .140 .000 XMRP 2.518C IN.
 .500 .140 .000 YMRP .0000 IN.
 .500 .140 .000 ZMRP .0000 IN.
 .500 .140 .000 SCALE .0010



DATA SET SYMBOL: (H03002) (G03003) (G03005)

CONFIGURATION DESCRIPTION: MSFC 570(IA3IF) (S3/2)/(O3)/(T9)/(S3/2) MSFC 570(IA3IF) (S3/2)/(O3)/(T10)/(S3/2) MSFC 570(IA3IF) (S3/2)/(O3)/(T9)/(S3/2)



ORBITAL DELTA Z SPADIA SPADAP REFERENCE INFORMATION

SREF .5720 SQ. IN

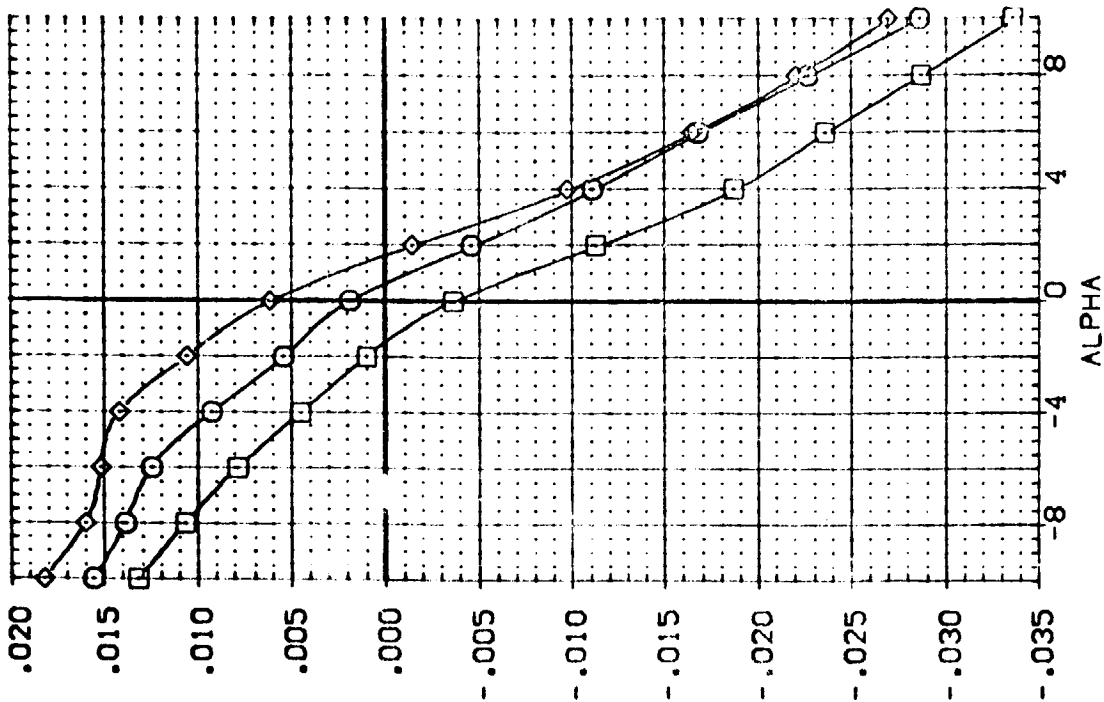
LREF 5.3130 IN

BREF 5.3130 IN

YMRP 2.5490 IN

ZMRP .0000 IN

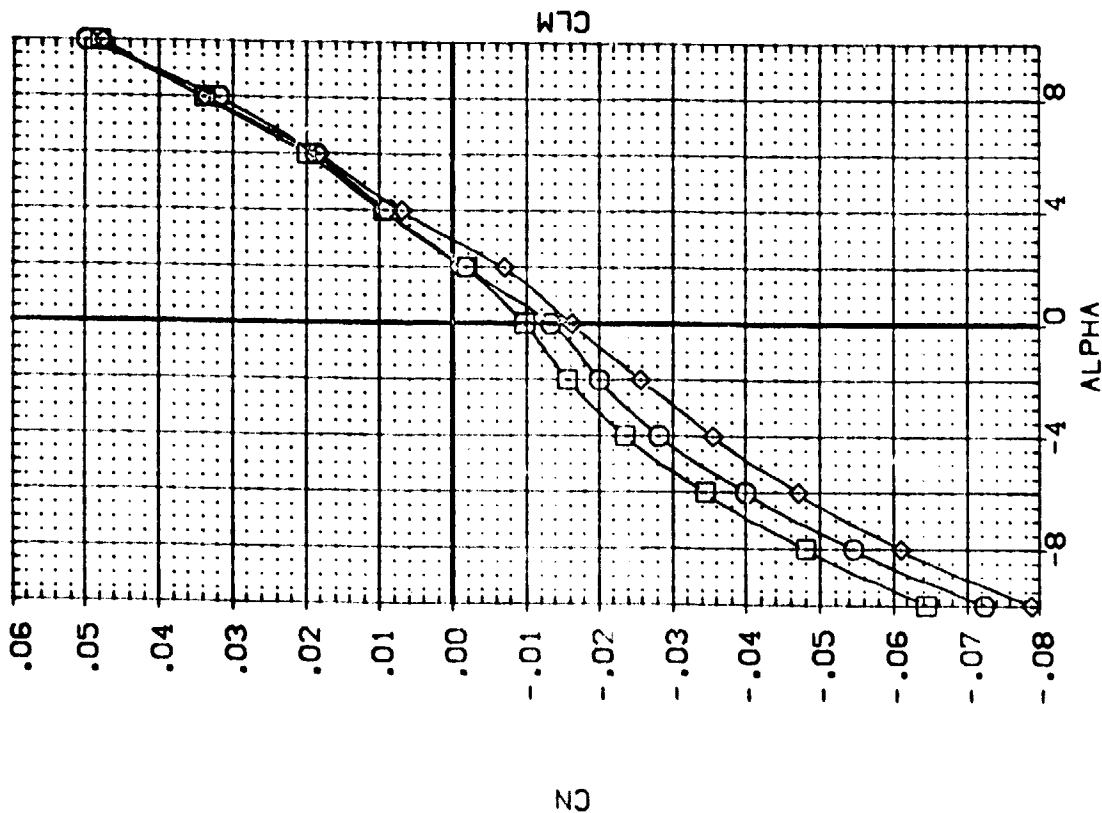
SCALE .0040



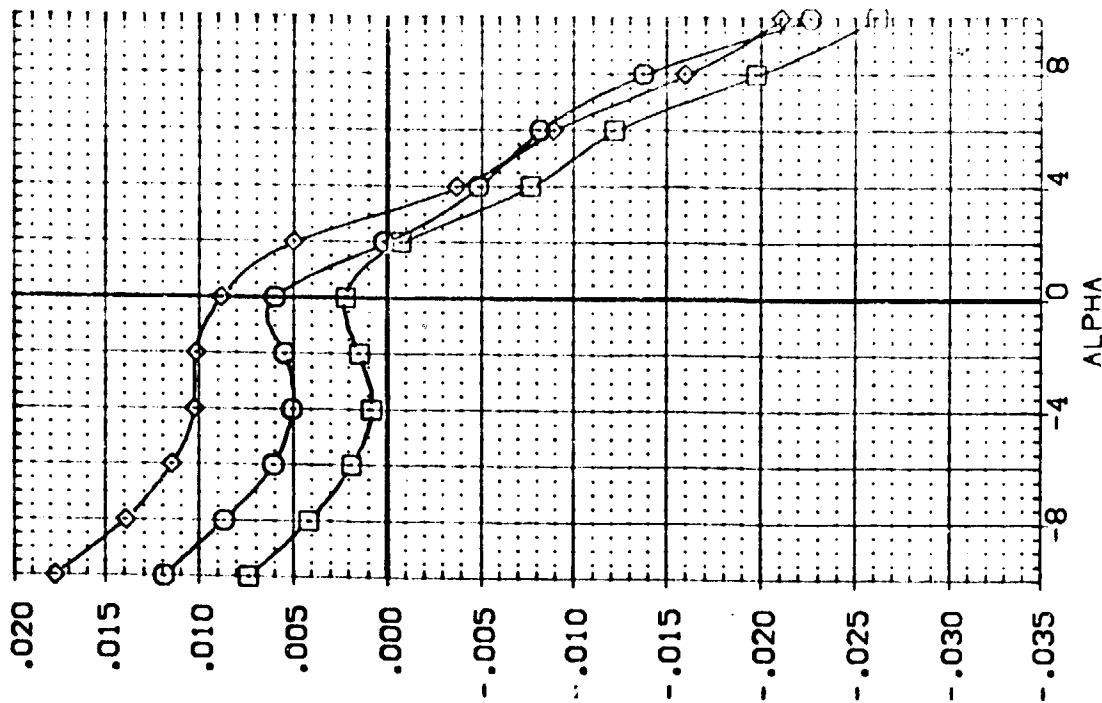
EFFECT OF ET STING ON LEFT-SIDE SRB

(B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (H83502) MSFC 570(IA3IF)(S3/2)/(O3)/(T9)/(S3/2)
 (G83563) MSFC 570(IA3IF)(S3/2)/(O3)/(T10)/(S3/2)
 (G83565) MSFC 570(IA3IF)(S3/2)/(O3)(T9)/(S3/2)



ORIGIN DELTA Z SPADIA SPAGAP REFERENCE INFORMATION
 .500 .140 .000 SREF .9720 SC IN
 .500 .140 .000 LREF 5.3130 IN
 .500 .140 .000 BREF 2.5480 IN
 .500 .140 .000 YMRP .0000 IN
 .500 .140 .000 ZMRP .0000 IN
 .500 .140 .000 SCALE .0040



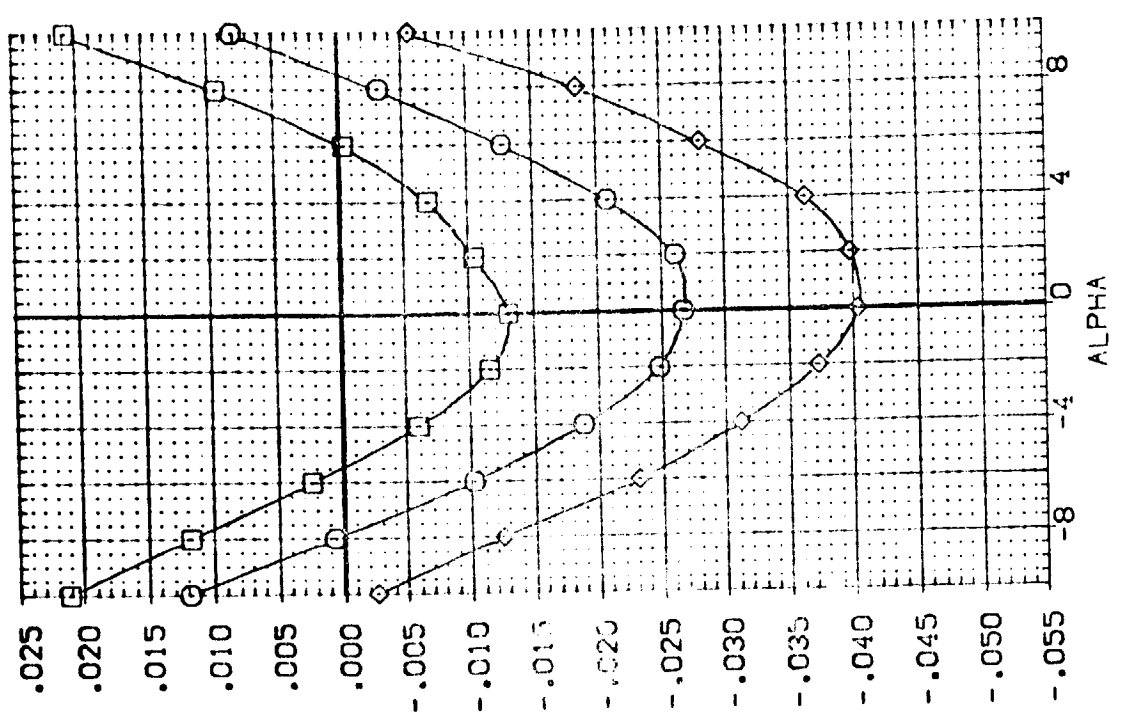
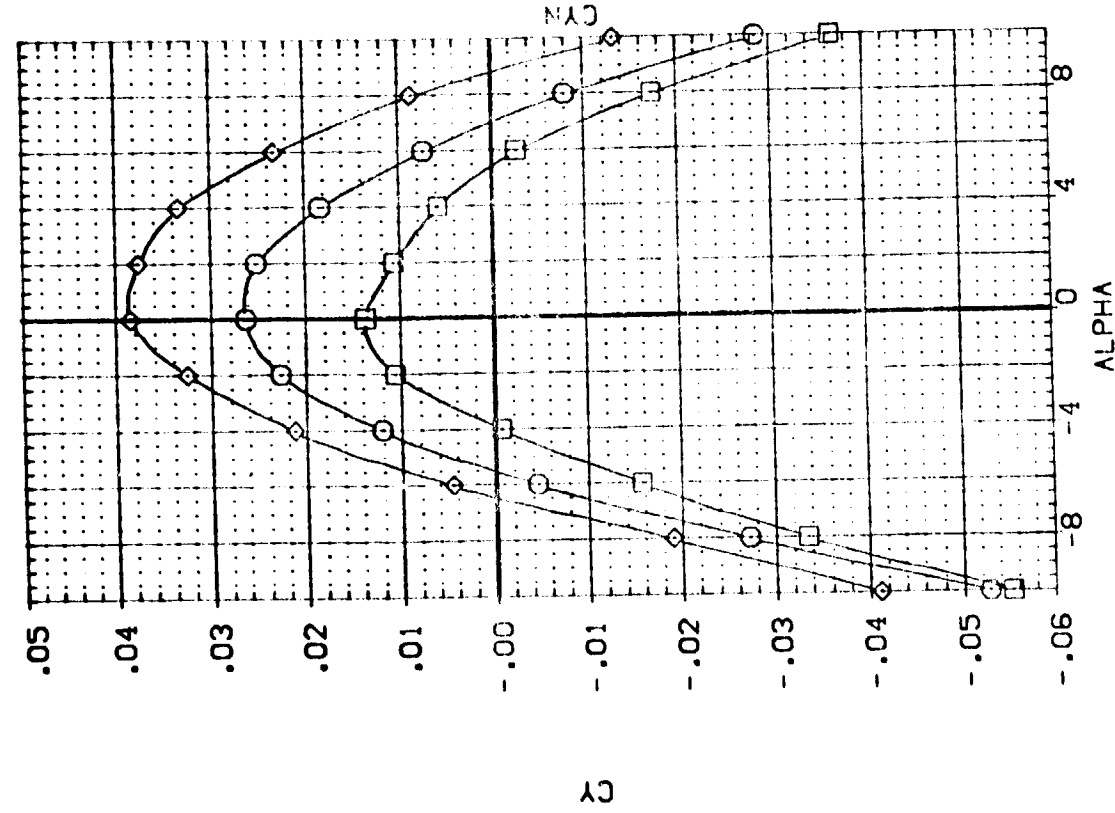
EFFECT OF ET STING ON LEFT-SIDE SRB
 (C)MACH = 1.25

DATA SET SYMBOL
 (H83502)
 (G83563)
 (G83565)

CONFIGURATION DESCRIPTION
 MSFC 570(IA3IF) (S3/2)/(03)/(T9)/(S3/2)
 MSFC 570(IA3IF) (S3/2)/(03)/(T10)/(S3/2)
 MSFC 570(IA3IF) (S3/2)/(03)/(T9)/(S3/2)

ORBITAL DELTA Z SPADIA SPAGAP
 .500 .140 .000
 .500 .140 .000
 .500 .140 .000

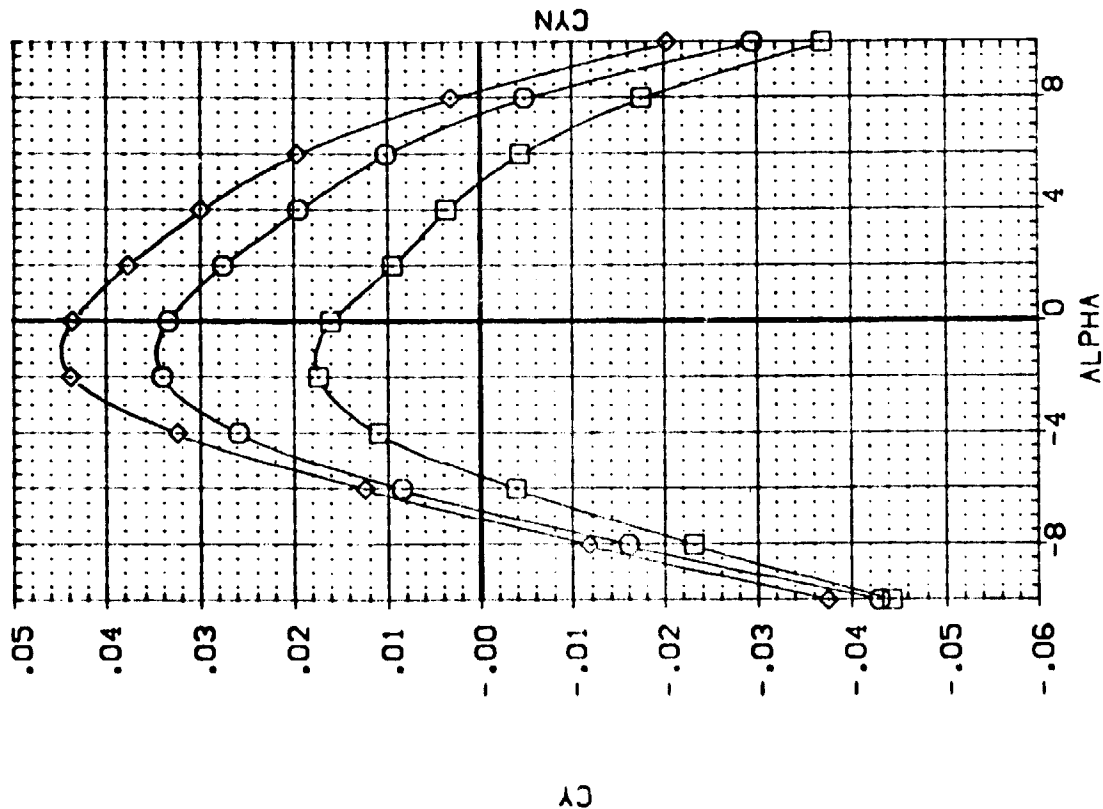
REFERENCE INFORMATION
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 LREF 5.3130
 BREF 5.3130
 XMRP 2.5430
 YMRP .0000
 ZMRP .0000
 SCALE .0040



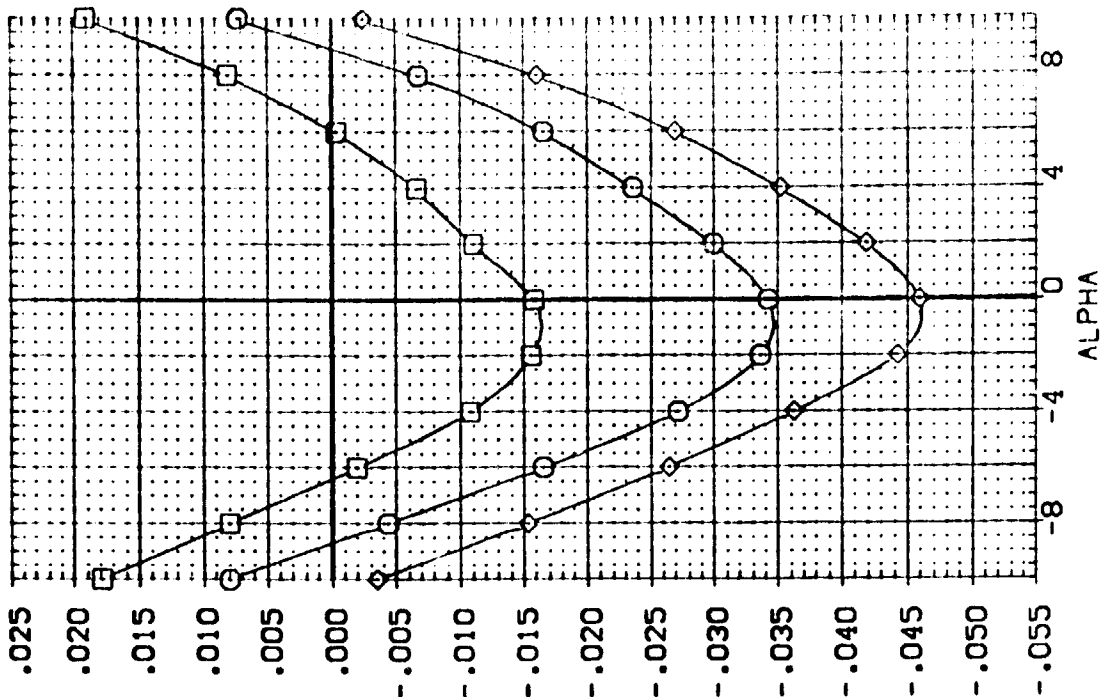
EFFECT OF ET STING ON LEFT-SIDE SRB

CALMACH = .90

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (H63502) HSC 570 (A31F) (S3/2) (S3/2) (S3/2)
 (063563) HSC 570 (A31F) (S3/2) (S3/2) (S3/2)
 (063565) HSC 570 (A31F) (S3/2) (S3/2) (S3/2)



ORBITAL DELTA Z SPADIA SPAGAP REFERENCE INFORMATION
 .500 .140 .000 SREF .9720 SQ .IN
 .500 .140 .000 LREF 5.3130
 .500 .140 .000 BREF 5.3130
 .500 .140 .000 XMRP 2.5450
 .500 .140 .000 YMRP .0000
 .500 .140 .000 ZMRP .0000
 .500 .140 .000 SCALE .0010



EFFECT OF ET STING ON LEFT-SIDE SRB

(B)MACH = 1.05

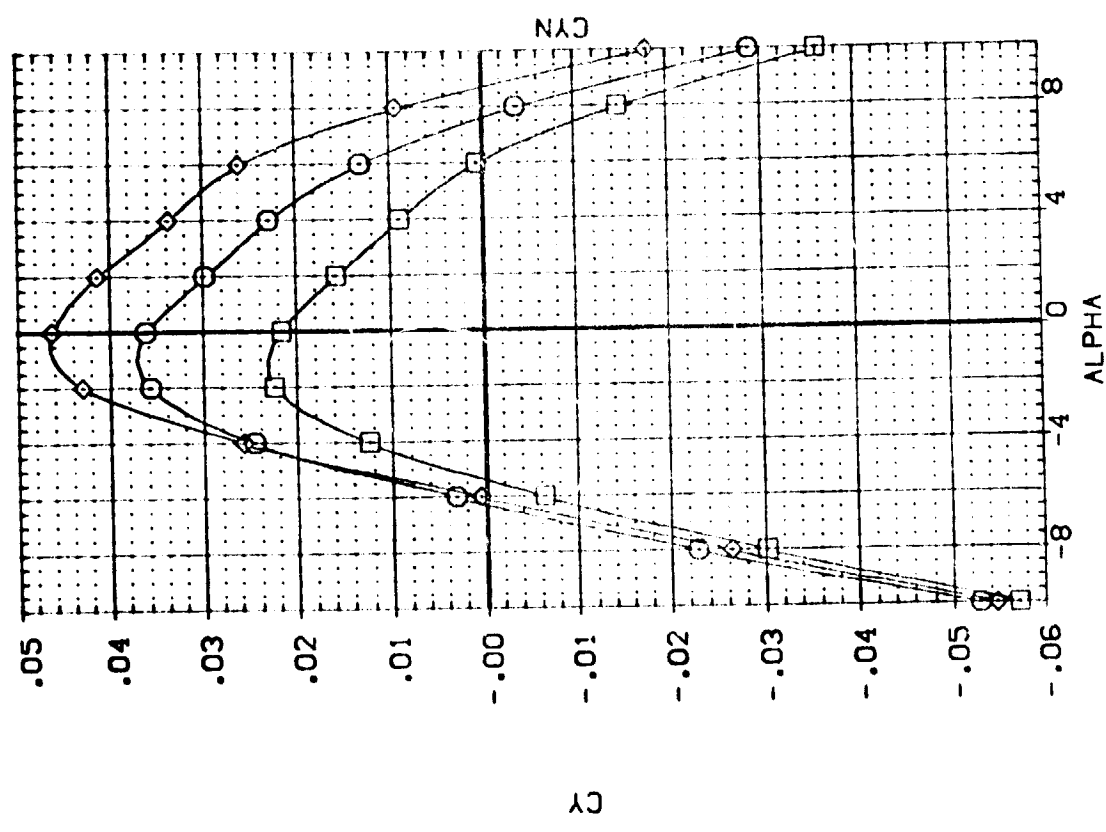


DATA SET SYMBOL CONFIGURATION DESCRIPTION

(H83502) HSC 570(1A31F)(S3/2)/(03)/(19)/(S3/2)

(083563) HSC 570(1A31F) (S3/2)/(03)/(110)/(S3/2)

(083565) HSC 570(1A31F) (S3/2)/(03)/(19)/(S3/2)



ORBITAL DELTA Z SPADIA SPAGAP REFERENCE INFORMATION SQ. IN

500 .140 .000 SREF .9720 IN.

500 .140 .000 LREF 5.3130 IN.

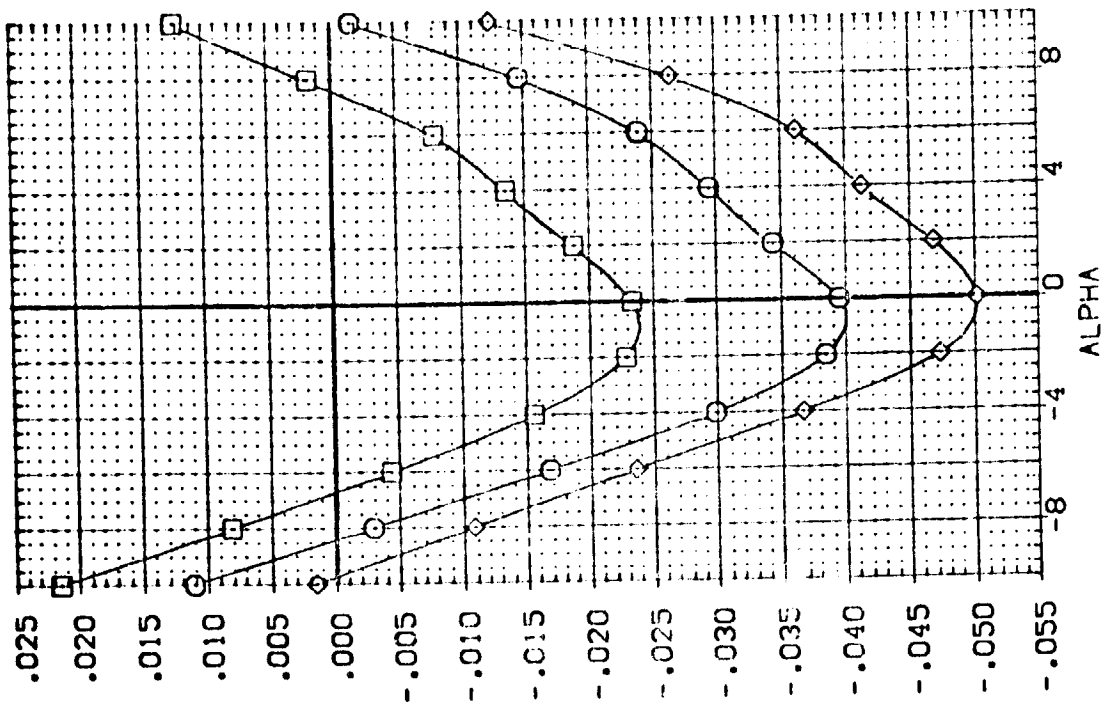
500 .140 .000 BREF 5.3130 IN.

500 .140 .000 XMRP 2.5490 IN.

500 .140 .000 YMRP .0000 IN.

500 .140 .000 ZMRP .0000 IN.

500 .140 .000 SCALE .0010

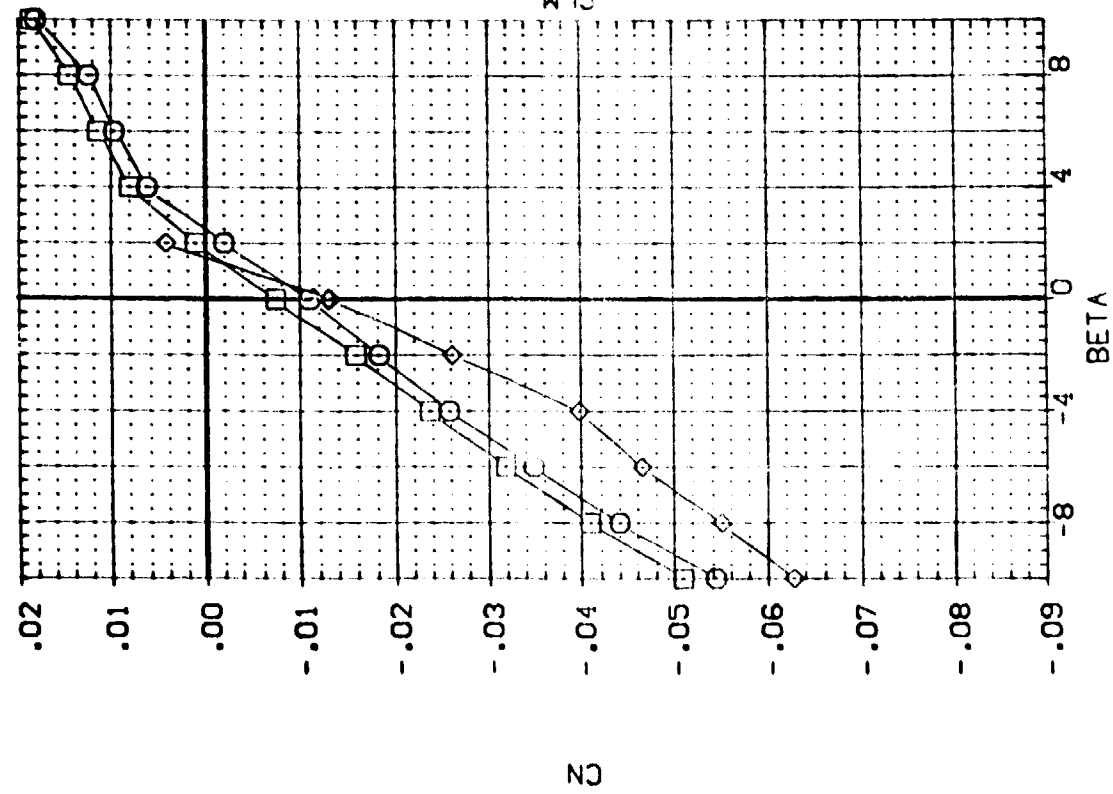


EFFECT OF ET STING ON LEFT-SIDE SRB

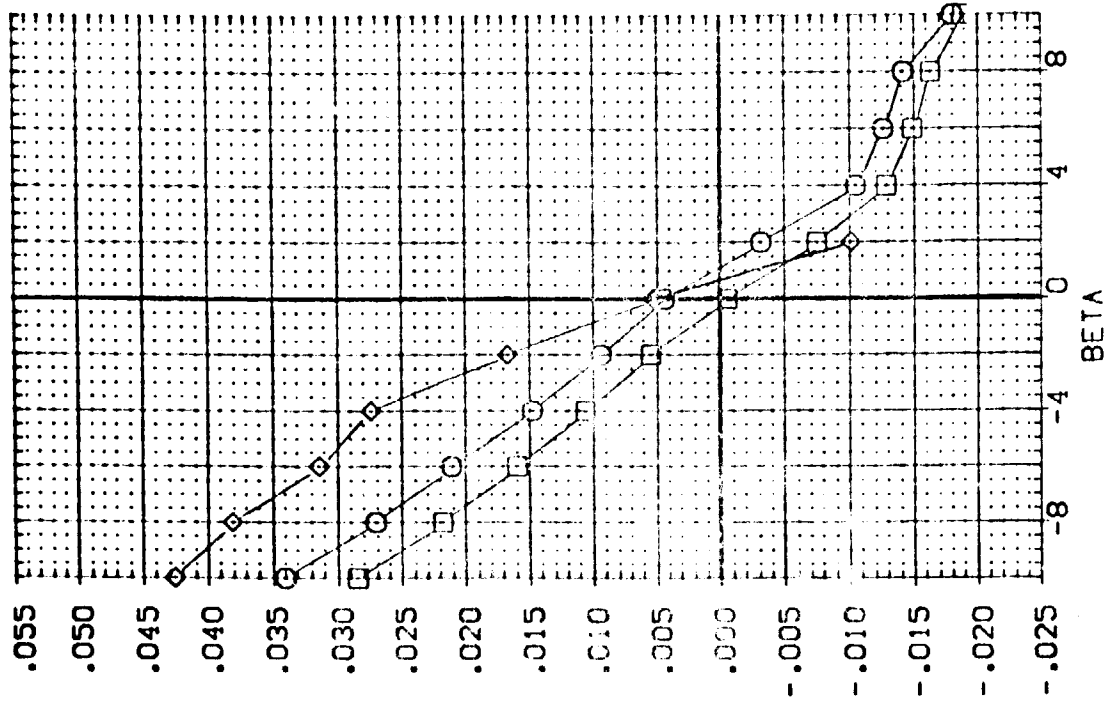
(C)MACH = 1.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(H35C7)	M5C 5701(A31F) (S3/2)/(031)/(T9)/(S3/2)
(H35C8)	M5C 5701(A31F) (S3/2)/(031)/(T10)/(S3/2)
(H35C6)	M5C 5701(A31F) (S3/2)/(031)/(T9)/(S3/2)

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (H83507) MSFC 570(IA3IF) (S3/2)/(O3)/(T9)/(S3/2)
 (G83554) MSFC 570(IA3IF) (S3/2)/(O3)/(T10)/(S3/2)
 (G83556) MSFC 570(IA3IF) (S3/2)/(O3)/(T9)/(S3/2)

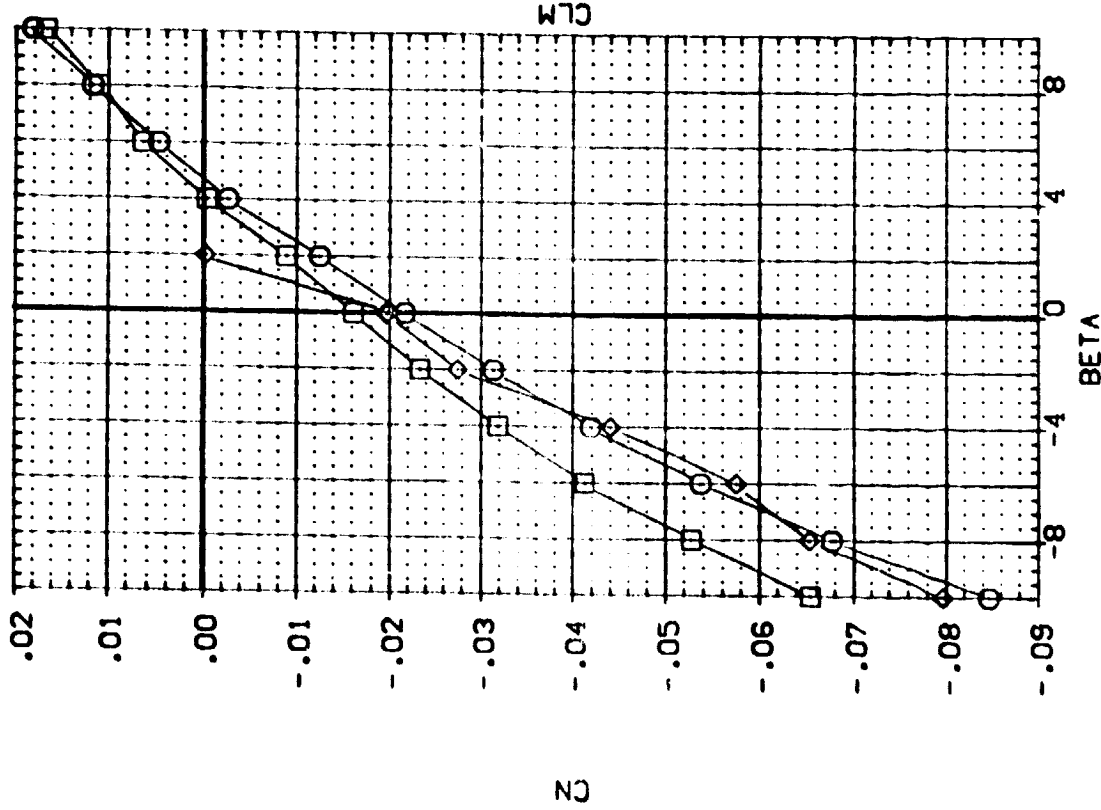


ORBITAL DELTA Z SPADIA SPAGAP REFERENCE INFORMATION
 .500 .140 .000 SREF .9720 50. IN
 .500 .140 .000 LREF 5.3130 1. IN
 .500 .140 .000 BREF 5.3130 1. IN
 .500 .140 .000 XMRP 2.5490 1. IN
 .500 .140 .000 YMRP .0000 1. IN
 .500 .140 .000 ZMRP .0000 1. IN
 .500 .140 .000 SCALE .0010 1. IN

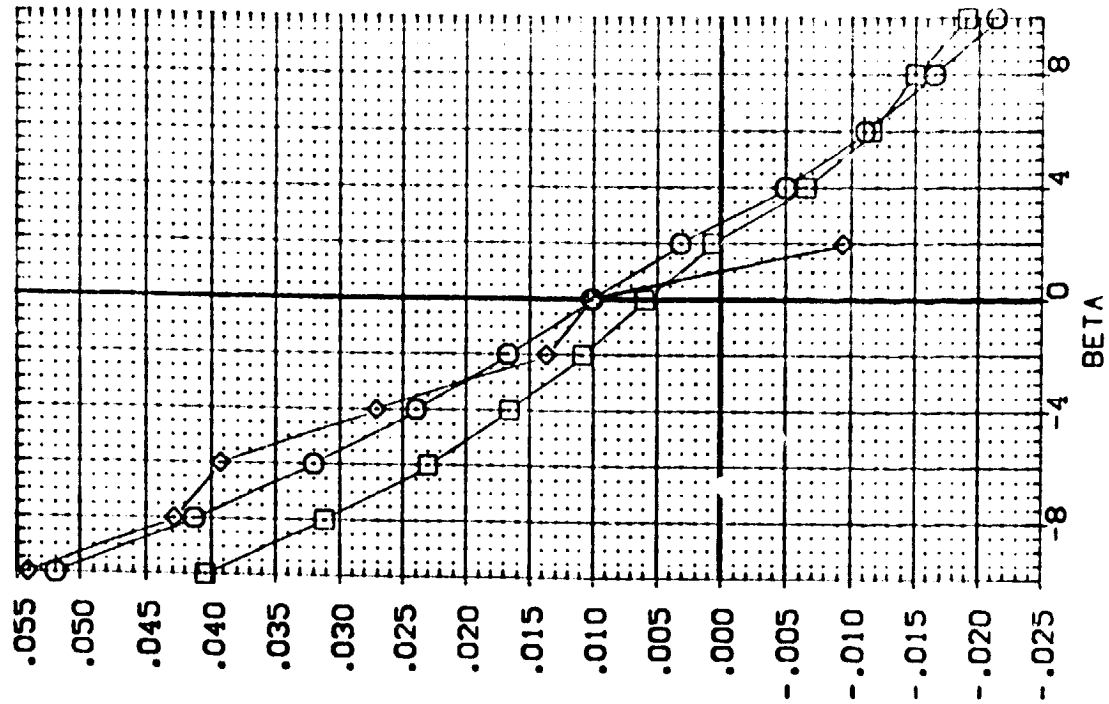


EFFECT OF ET STING ON LEFT-SIDE SRB
 (B)MACH = 1.05

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (H83507) MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)
 (G83554) MSFC 570(A31F)(S3/2)/(O3)/(T10)/(S3/2)
 (G83566) MSFC 570(A31F)(S3/2)/(O3)/(T9)/(S3/2)






ORIGIN DELTA Z SPADIA SPAGAP REFERENCE INFORMATION IN
 .500 .140 .000 SREF .9720 SQ.
 .500 .140 .000 LREF 5.3130 SZ
 .500 .140 .000 GREF 2.3130 ZZ
 .500 .140 .000 XMRP 2.5490
 .500 .140 .000 YMRP .0000
 .500 .140 .000 ZMRP .0000
 .500 .140 .000 SCALE .0040



EFFECT OF ET STING ON LEFT-SIDE SRB
 (C)MACH = 1.25



CONFIGURATION DESCRIPTION

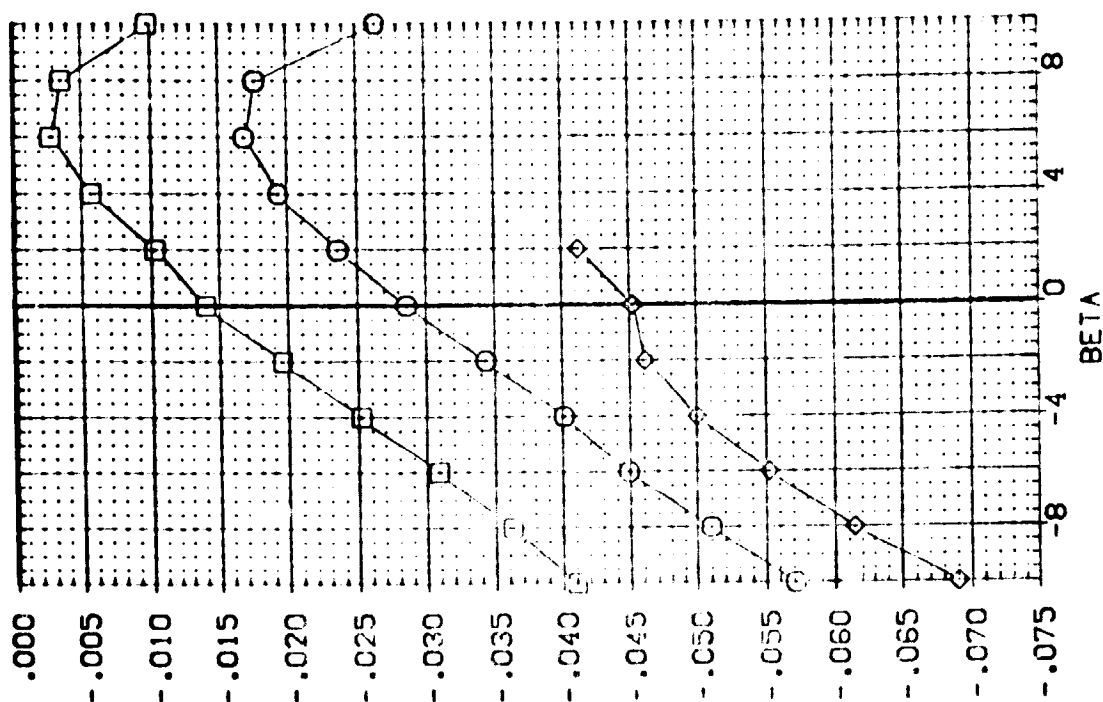
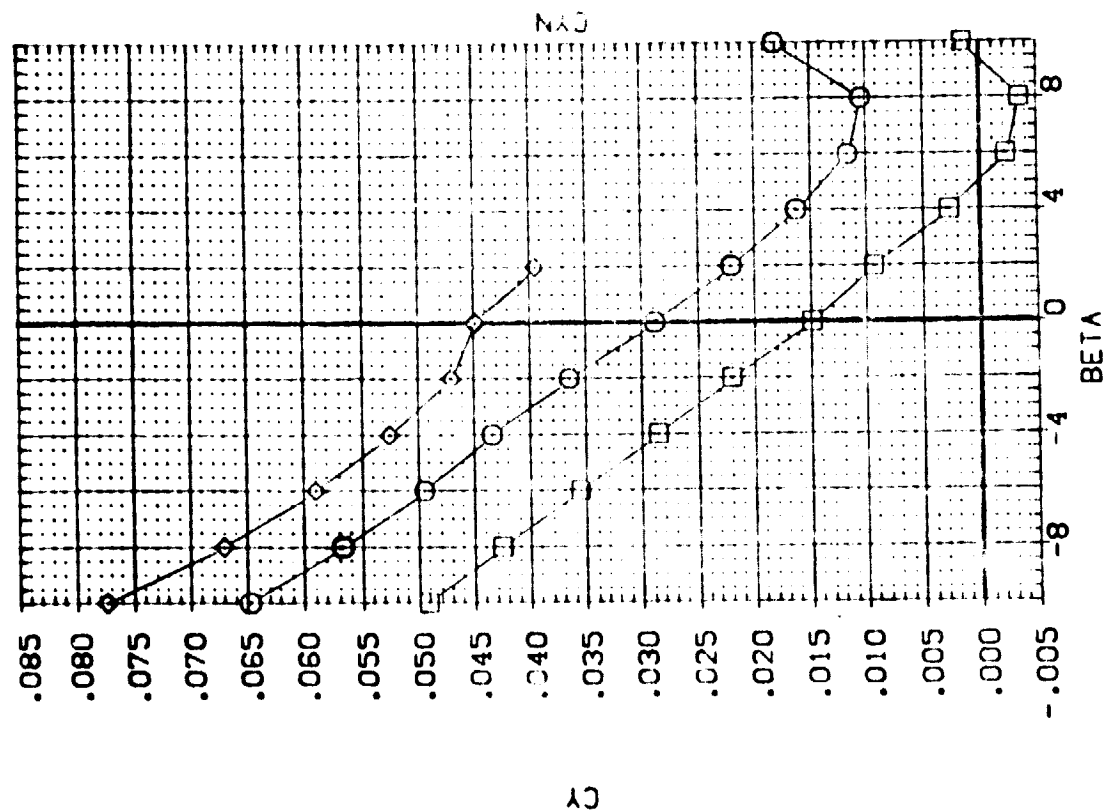
DATA SET SYMBOL	Symbol
(MGS07)	
(GGS64)	
(GGS66)	

CONFIGURATION	DESCRIPTION
MFC 570(IA3:F) (S3/2)/(C3)/(T9)/(S3/2)	
MFC 570(IA3:F) (S3/2)/(C3)/(T10)/(S3/2)	
MFC 570(IA3:F) (S3/2)/(C3)/(T9)/(S3/2)	

ORB INC	DELTA Z	SPADIA	SPADAP
.500	.140	.000	.000
.500	.140	.000	.000
.500	.140	.000	.000

EF	\$3,9720	IN
EF	5.3130	
EF	5.3130	
RP	2.5490	
RP	.0000	
RP	.0000	
ALE	.0010	

REF
BREF
LREF
BREF
XMRP
YMRP
ZMRP
SCALE

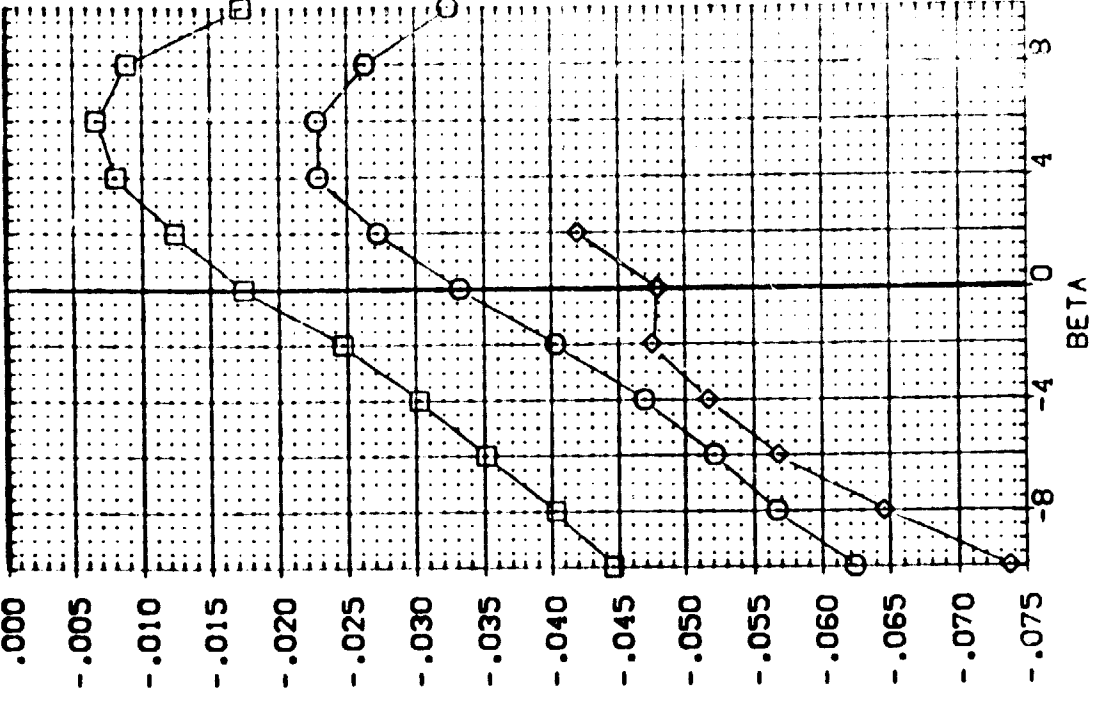
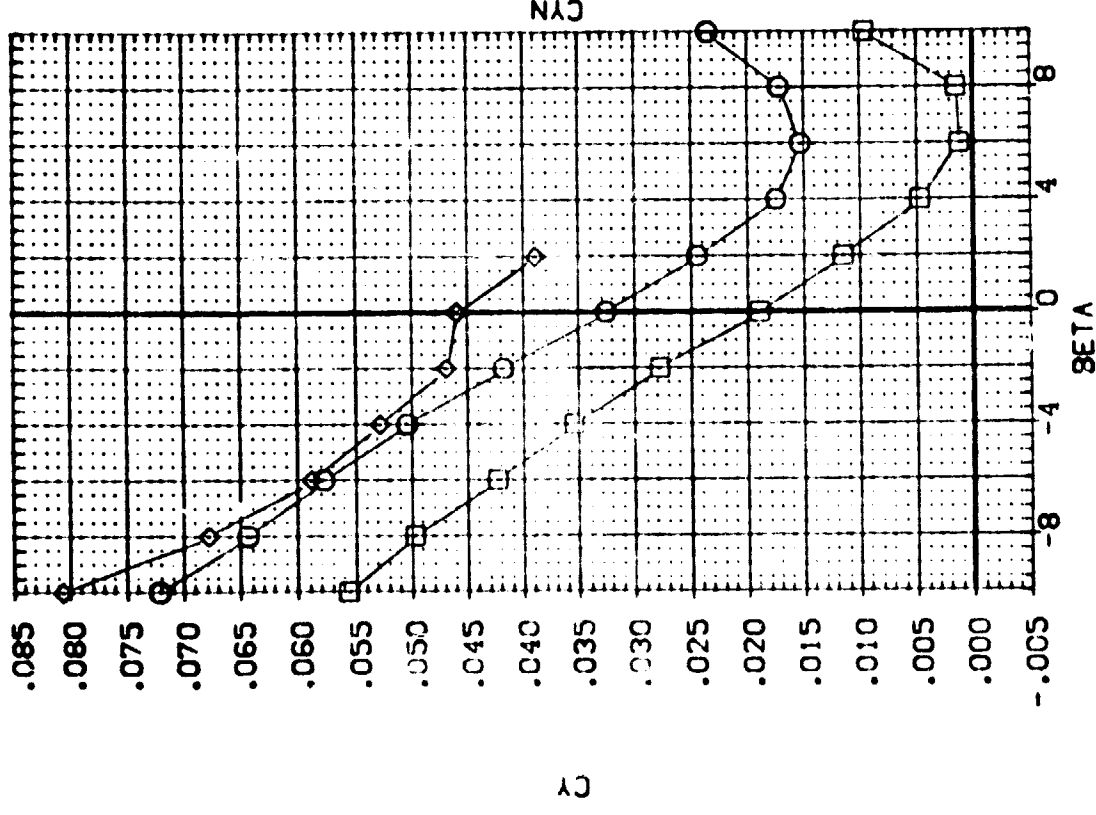


EFFECT OF ET STING ON LEFT-SIDE SRB

(A) 24 CH = .90

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (H02807) (S3/2)/(S3/2)/(S3/2)/(S3/2)
 (H02807) (S3/2)/(S3/2)/(S3/2)/(S3/2)
 (H02807) (S3/2)/(S3/2)/(S3/2)/(S3/2)

ORIGIN DELTAZ SPADIA SPADAP REFERENCE INFORMATION
 .500 .140 .000 SREF .9720 SO. IN
 .500 .140 .000 LREF 5.3130 IN.
 .500 .140 .000 XREF 5.3130 IN.
 .500 .140 .000 YREF 2.5490 IN.
 .500 .140 .000 ZREF .0000 IN.
 .500 .140 .000 SCALE .0010

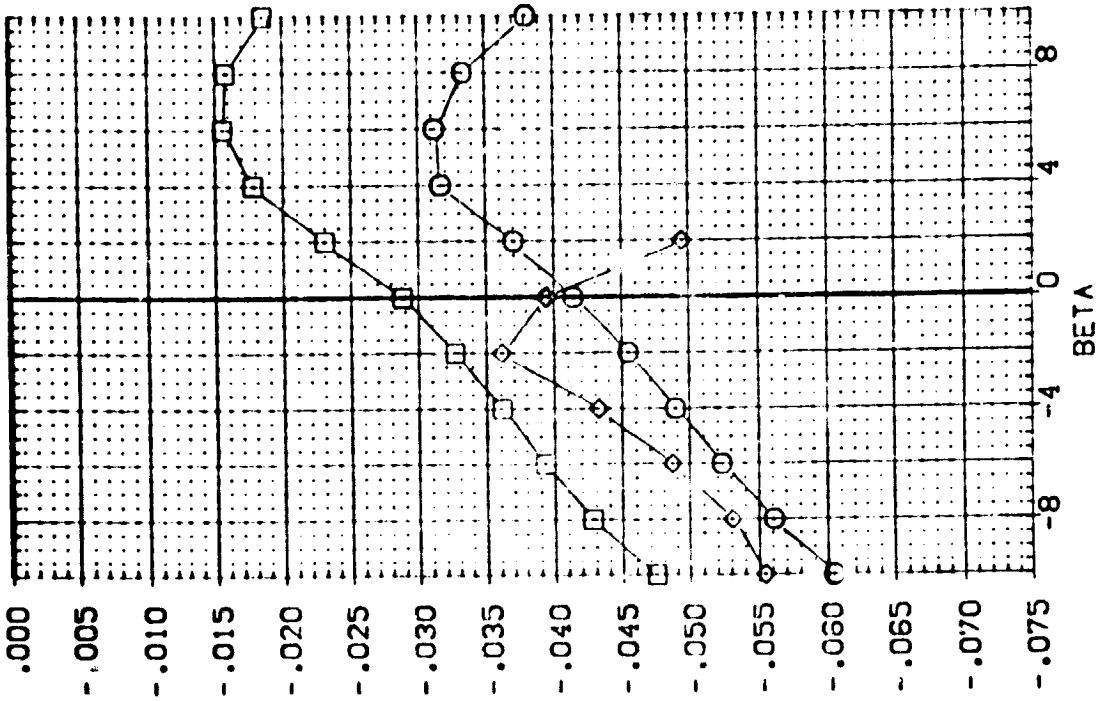
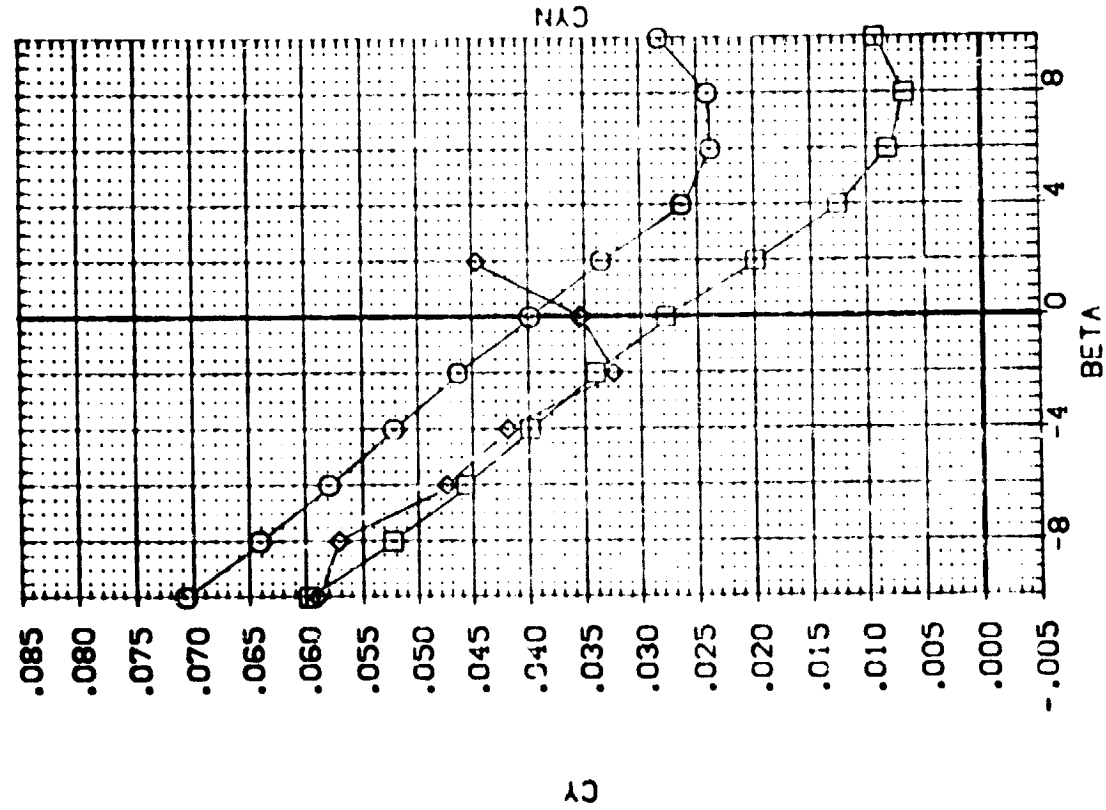


EFFECT OF ET STING ON LEFT-SIDE SRB

(B)MACH = 1.05

DATA SET SYMBOL. CONFIGURATION DESCRIPTION
 (H03507) (S3/2)/(S3/2)/(S3/2)/(S3/2)
 (H03507) (S3/2)/(S3/2)/(S3/2)/(S3/2)
 (H03507) (S3/2)/(S3/2)/(S3/2)/(S3/2)

ORBITAL DELTAZ SPADIA SPAGAP REFERENCE INFORMATION SQ. IN
 .500 .140 .000 SREF .9720
 .500 .140 .000 LREF 5.3130
 .500 .140 .000 BREF 2.3130
 .500 .140 .000 XPRP 2.5490
 .500 .140 .000 YPRP .0000
 .500 .140 .000 ZPRP .0000
 .500 .140 .000 SCALE .0040

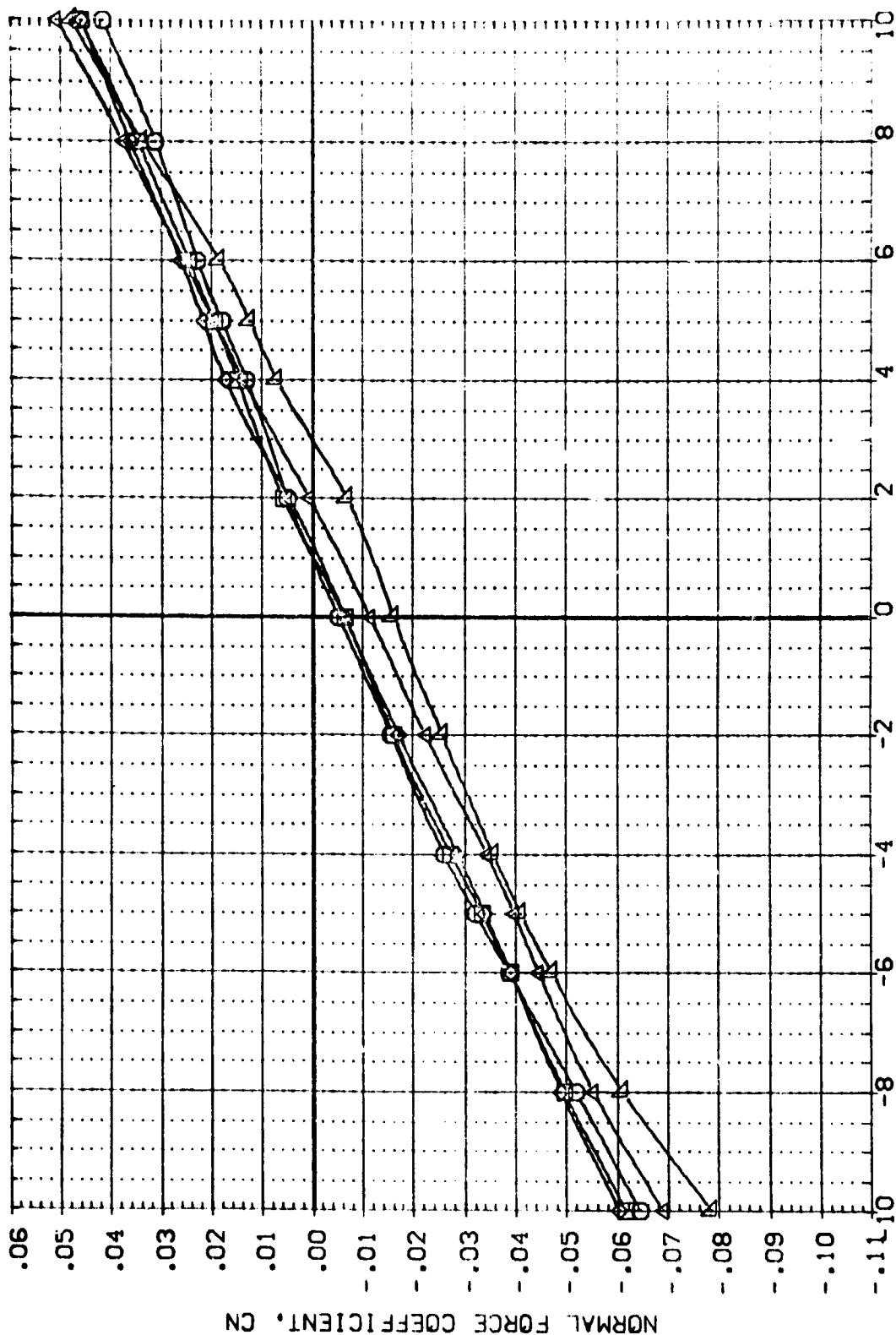


EFFECT OF ET STING ON LEFT-SIDE SRB
 (C)MACH = 1.25

MSFC 570(1A31F) (S3/2)/(03)(19)/(S3/2)

(N83S65)

SYMBOL	MACH	BETA	DELTA Z	CONF IG	316.000	PARAMETRIC VALUES	SREF	REFERENCE INFORMATION
○	.568			.000		CONF IG	.9720	IN
◇	.804			.140		RUDER	5.3130	IN
□	.900			.000		ORBIT INC	5.3130	IN
△	1.047			.000		SPADIA	2.5490	IN
	1.247			.000		SPAGAP	.0000	IN
				.000		SCALE	.0000	IN



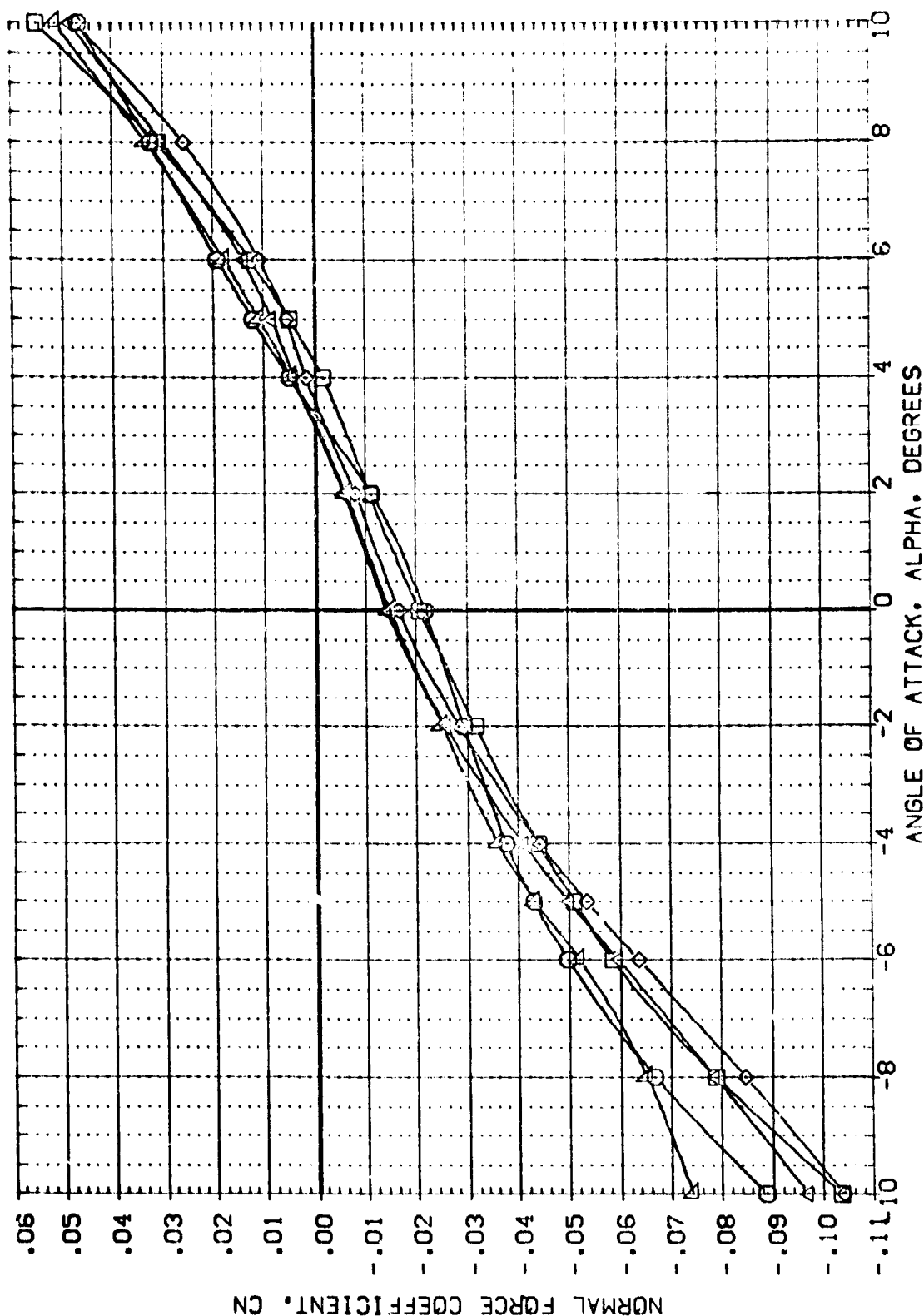
LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK



(N83S65)

MSFC 570(IA31F) (S3/2)/(03)(T9)/(S3/2)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	CONFIG	316.000	SREF	9720	SG IN
○	1.461	DELTA Z	.000	.000	LREF	5.3130	5.3130
□	1.969	X-SRB	.140	.000	BREF	5.3130	5.3130
◇	2.990	SPACER	.000	.500	XMRP	2.5490	2.5490
△	3.480	SPADIA	.000	.000	YMRP	.0000	.0000
▽	4.960	SPAGAP	.000	.000	ZMRP	.0000	.0000
					SCALE	.0010	.0010



(N83S65)

MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)

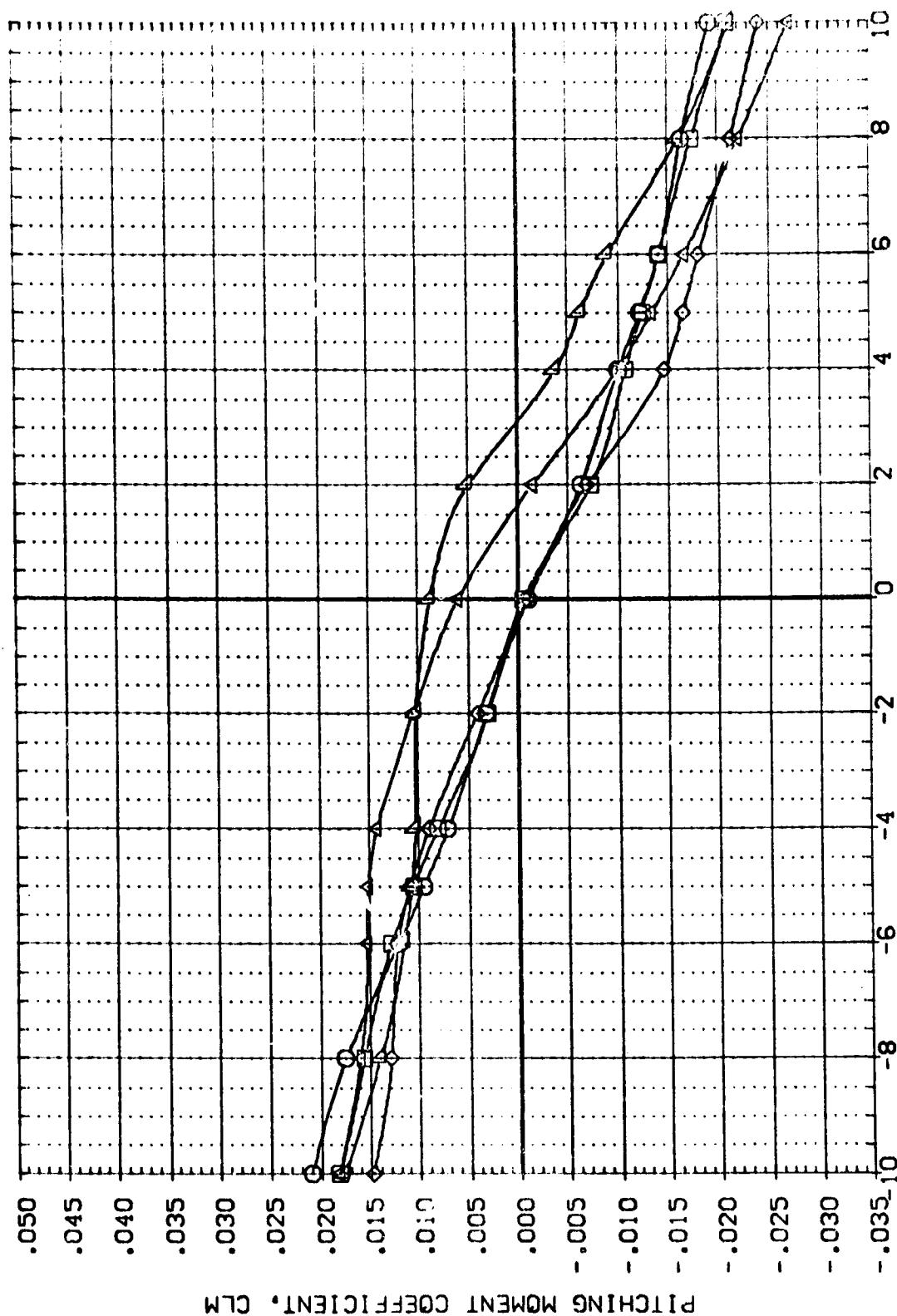
REFERENCE INFORMATION
SREF 5720
LREF 5.3130
BREF 5.3130
XMRP 2.5450
YMRP .0000
ZMRP .0000
SCALE .0010

PARAMETRIC VALUES
CONFIG 316.000
RUDDER .000
ORBITAL .500
SPADIA .000

BETA .000
DELTAZ .140
X-SRB .000
SPACER .000
SPAGAP .000

SYMBOL
□
◇
△

MACH
.598
.804
.900
1.047
1.247



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

(N83S65)

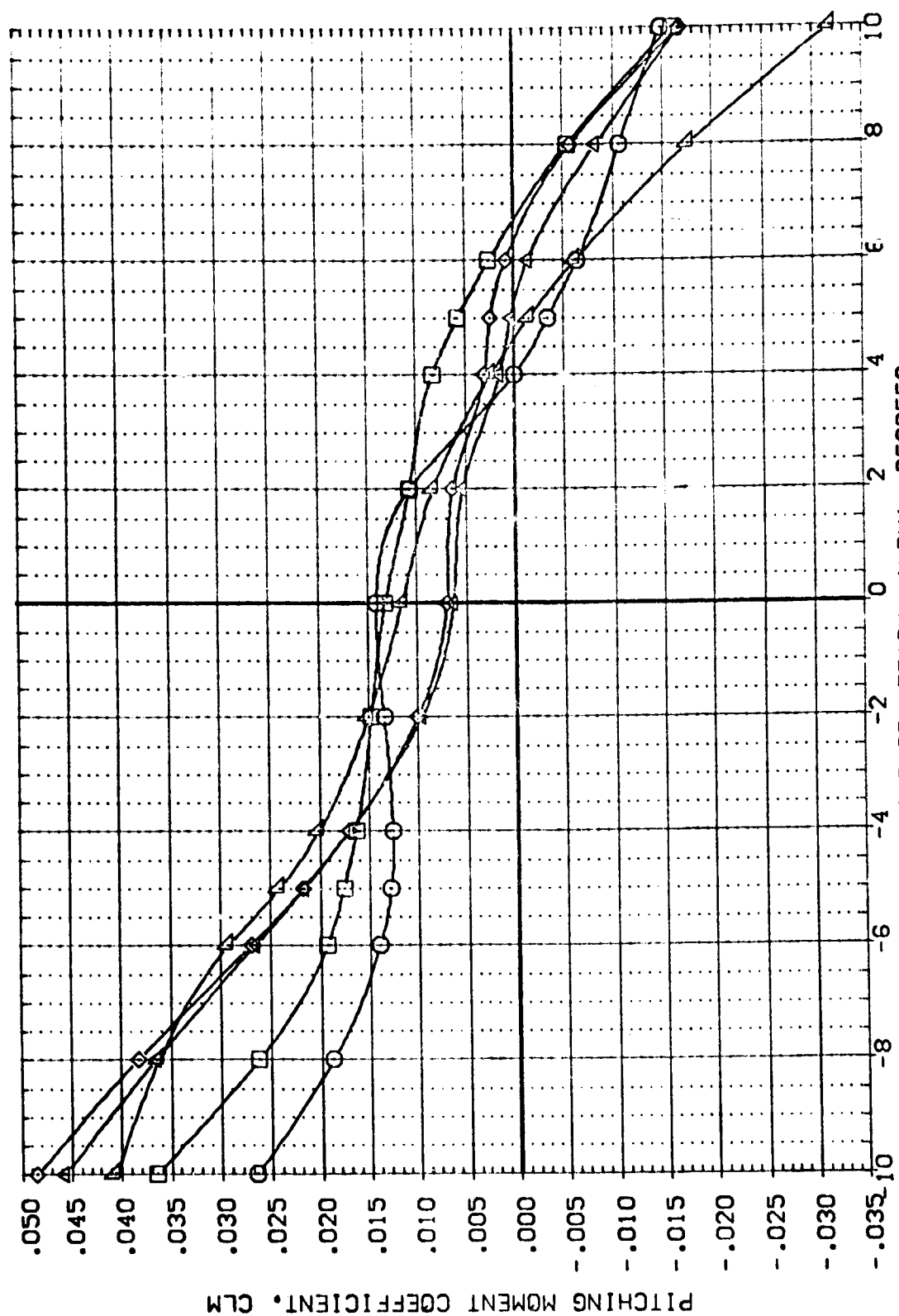
MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)

REFERENCE INFORMATION
SREF .9720 SQ. IN
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5450 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0040

PARAMETRIC VALUES
CONFIG 316.000
RUDDER .000
DRBINC .500
SPADIA .000
SPAGAP .000

BETA
DELTA Z
X-SRB
SPACER
SPAGAP

SYMBOL
MACH
1.461
1.969
2.990
3.480
4.960

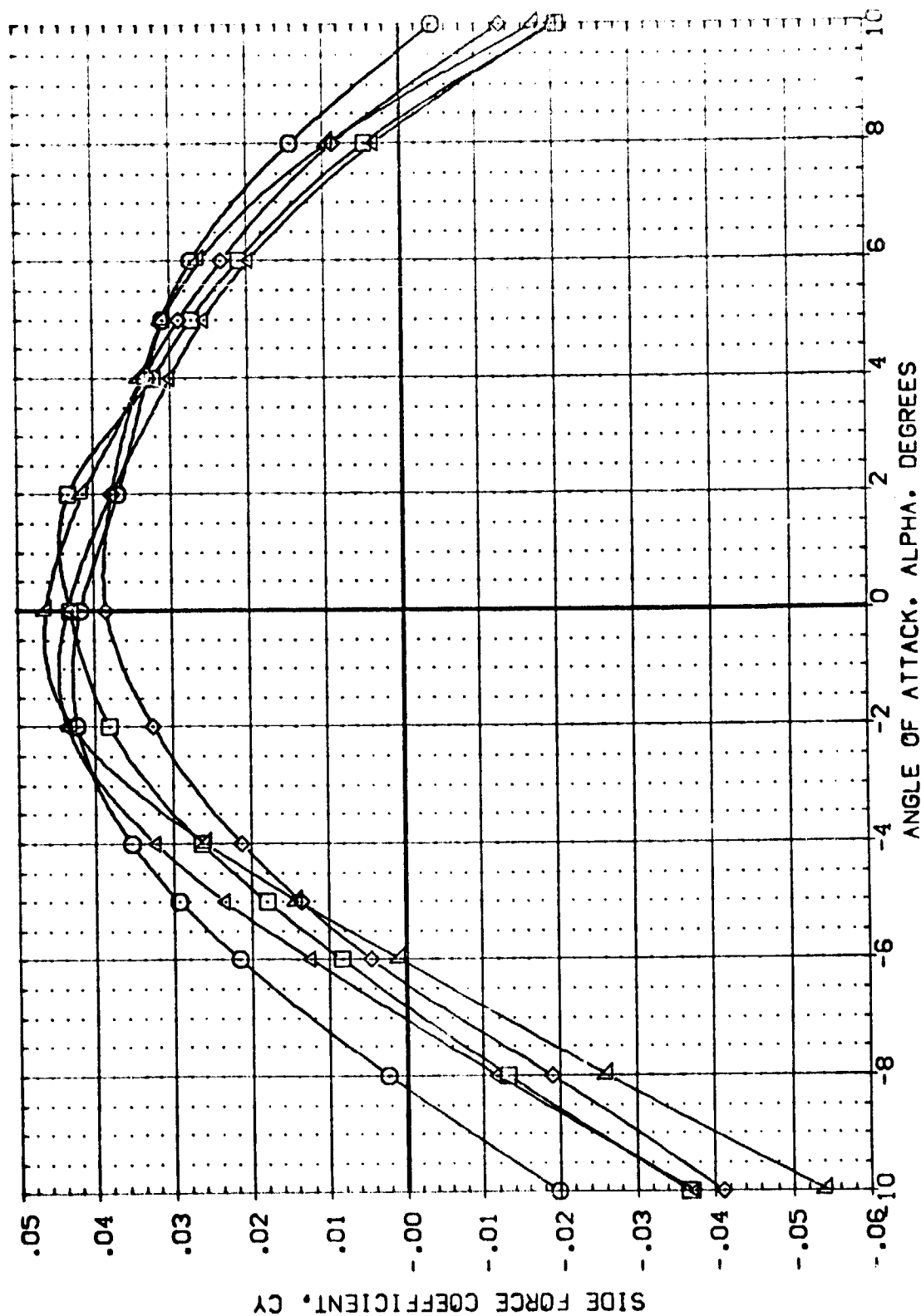


LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

MSFC 570(IA31F) (S3/2)/(03)(T9)/(S3/2)

(N83S65)

SYMBOL	MACH	BETA	DELTA Z	CONF IG	316.000	REFERENCE INFORMATION
○	.598			.000		SREF .9720
□	.804			.140		LREF 5.3130
◇	.900			.000		BREF 5.3130
△	1.047			.000		XTRP 2.5450
▽	1.247			.000		YTRP .0000
				.000		ZTRP .0000
				.000		SCALE .0010

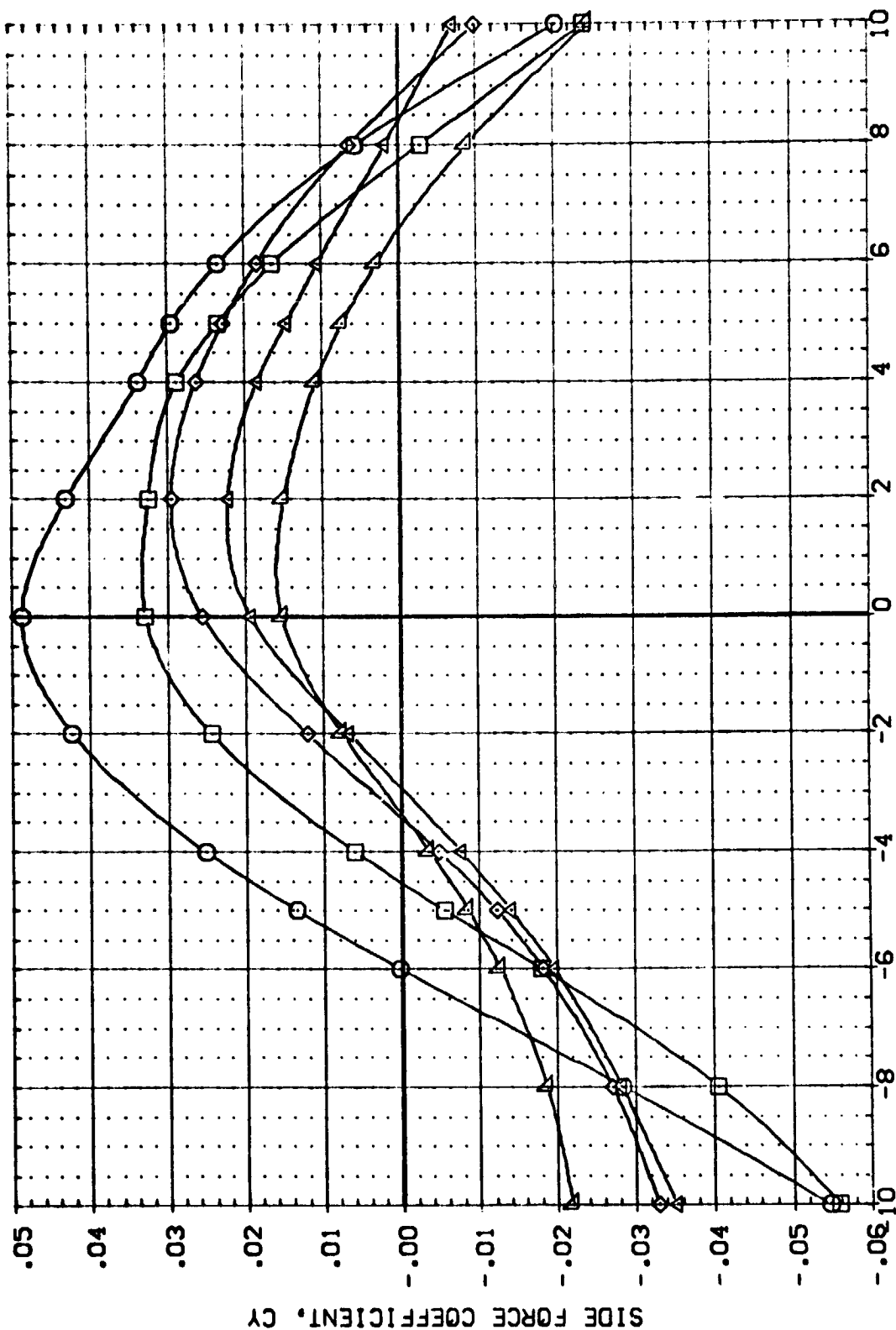


LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

MSFC 570(IA31F) (S3/2)/(03)(T9)/(S3/2)

(N83S65)

SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION			
	MACH	BETA	CONF IG	316 .000	SRF	LREF	IN.	IN.
○	1.461	DELTA Z	.000	.000	5.3130	5.3130	IN.	IN.
□	1.969	X-SRB	.140	.000	2.5490	2.5490	IN.	IN.
◇	2.990	SPACER	.000	.500	.0000	.0000	IN.	IN.
△	3.480	SPADIA	.000	.000	.0000	.0000	IN.	IN.
▽	4.960	SPAGAP	.000	.000	.0040	.0040	IN.	IN.

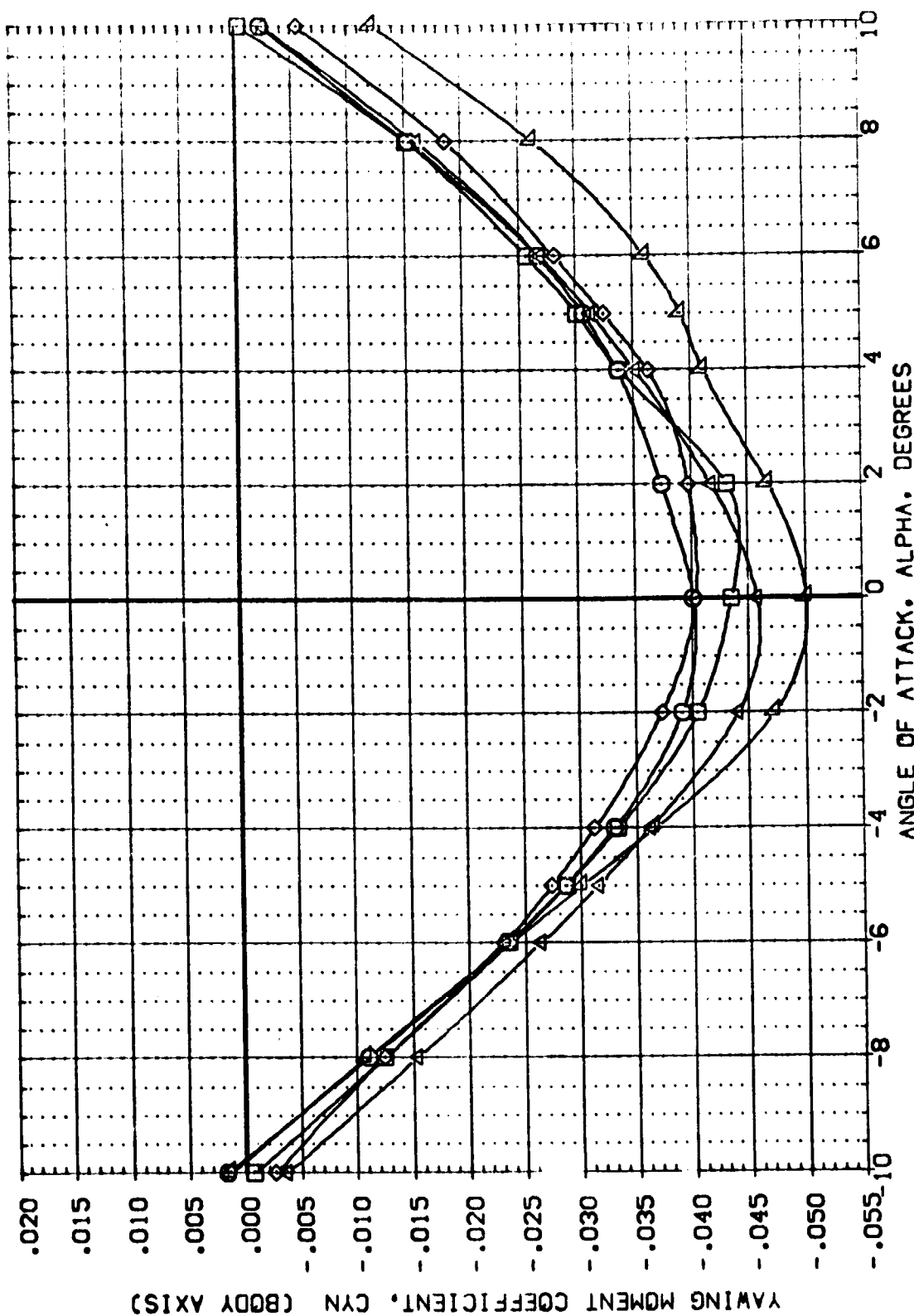


LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

MSFC 570(1A31F) (S3/2)/(03)(19)/(S3/2)

(N83565)

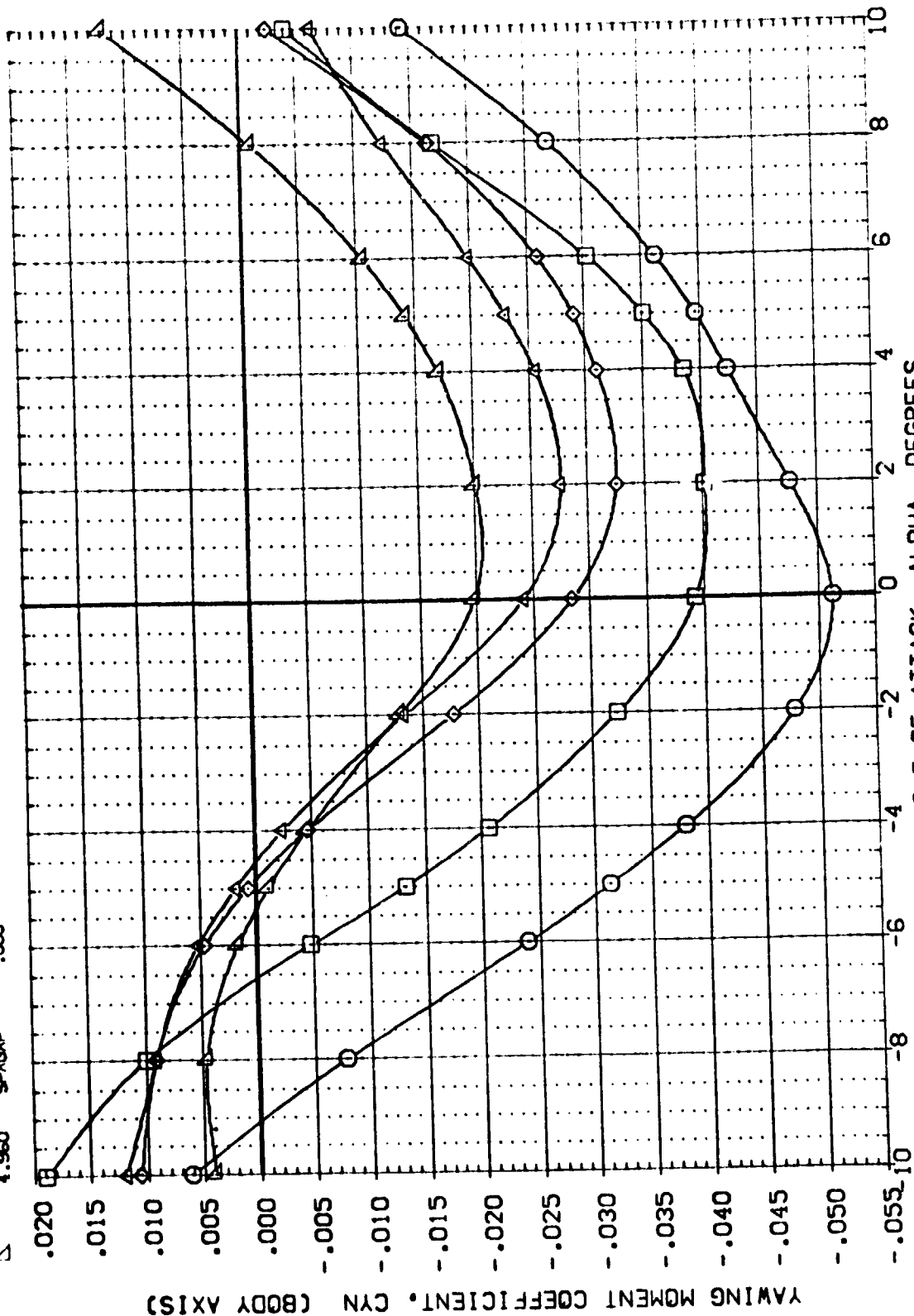
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION			
		BETA	DELTA Z	CONF IG	316.000	SREF	LREF	IN	IN
○	.598	.000	.140	RUDER	.000	.5720	.53130	.53130	.53130
□	.804	.000	.000	ORBIT	.500	.53130	.53130	.53130	.53130
◇	.900	.000	.000	SPADIA	.000	.53130	.53130	.53130	.53130
△	1.047	.000	.000	SPAGER	.000	.53130	.53130	.53130	.53130
▽	1.247	.000	.000	SPAGAP	.000	.53130	.53130	.53130	.53130



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

(N83565)

MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK

MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)

(P83566)

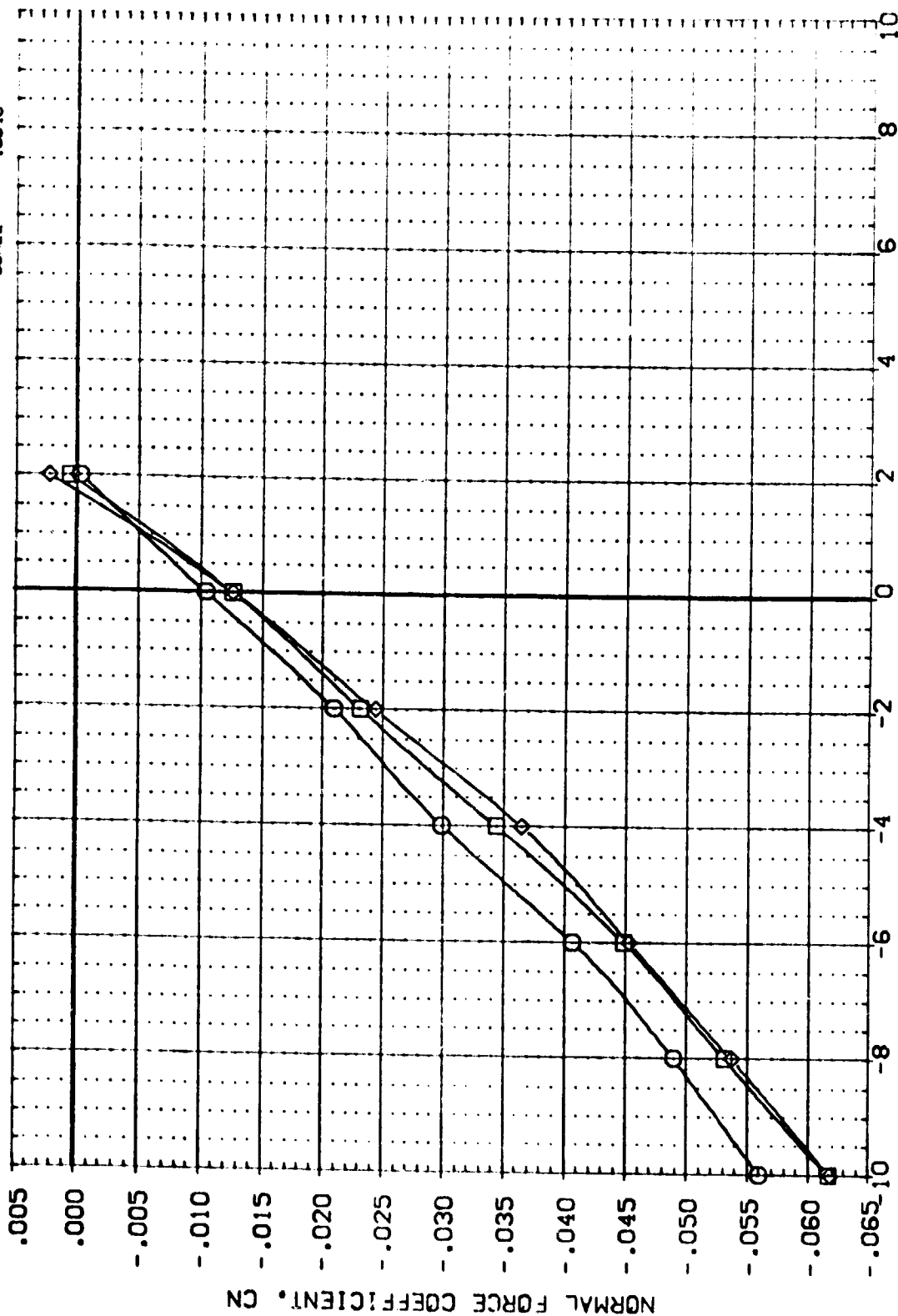
SYMBOL

MACH

PARAMETRIC VALUES

ALPHA .587
DELTAZ .804
X-SRB .901
SPACER .000
SPAGAP .000

REFERENCE INFORMATION
SREF .5720
LREF 5.3130
BREF 5.3130
YMRP 2.5490
ZMRP .0000
SCALE .0040



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 0 DEGREES



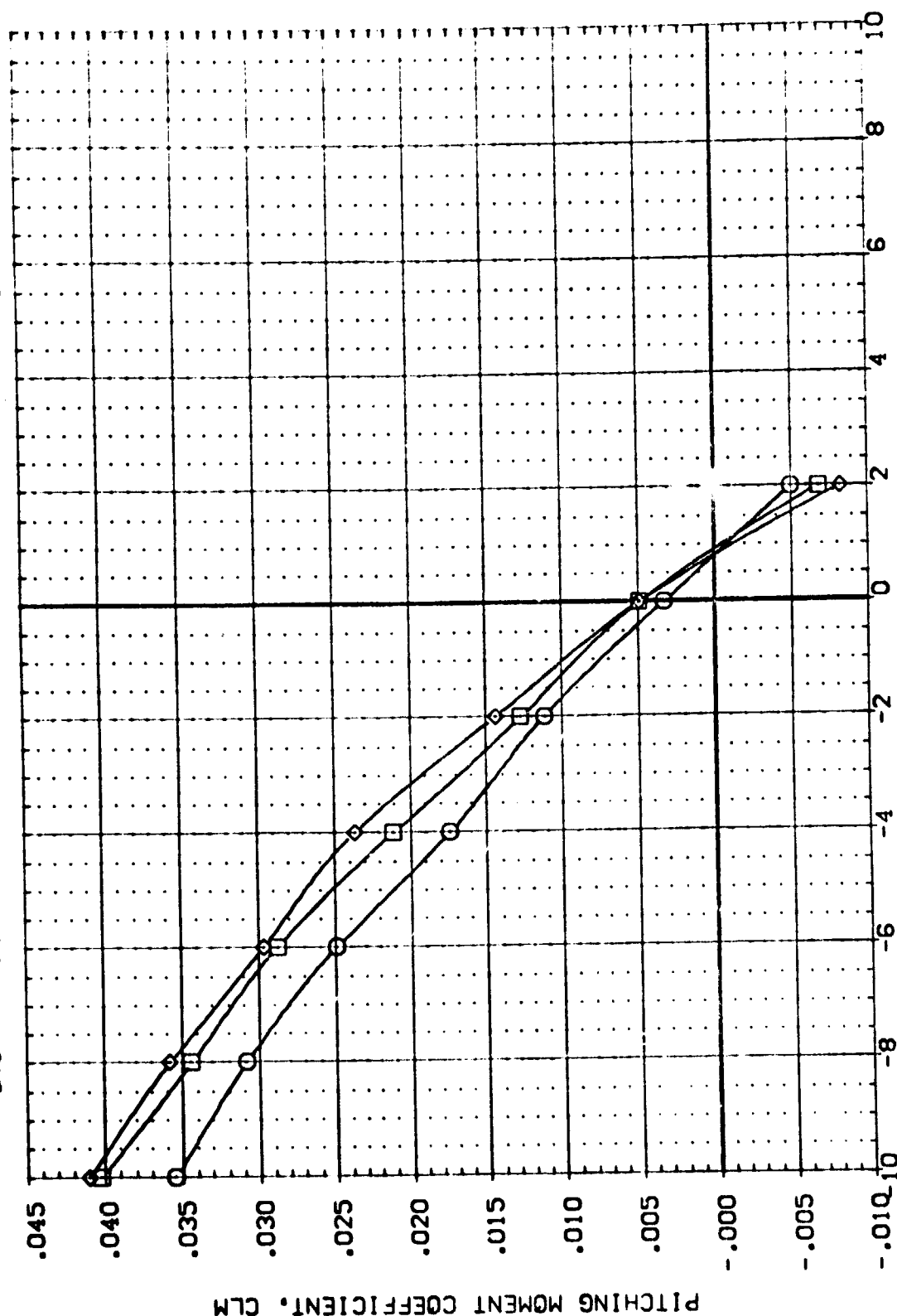
(P83566)

MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)

REFERENCE INFORMATION
SREF .9720 SQ. IN
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5490 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0010

PARAMETRIC VALUES
MACH .597 ALPHA .000 CONFIG 316.000
DELTAZ .804 RUDDER .000
X-SRB .501 ORBINC .500
SPACER SPADIA .000
SPAGAP .000

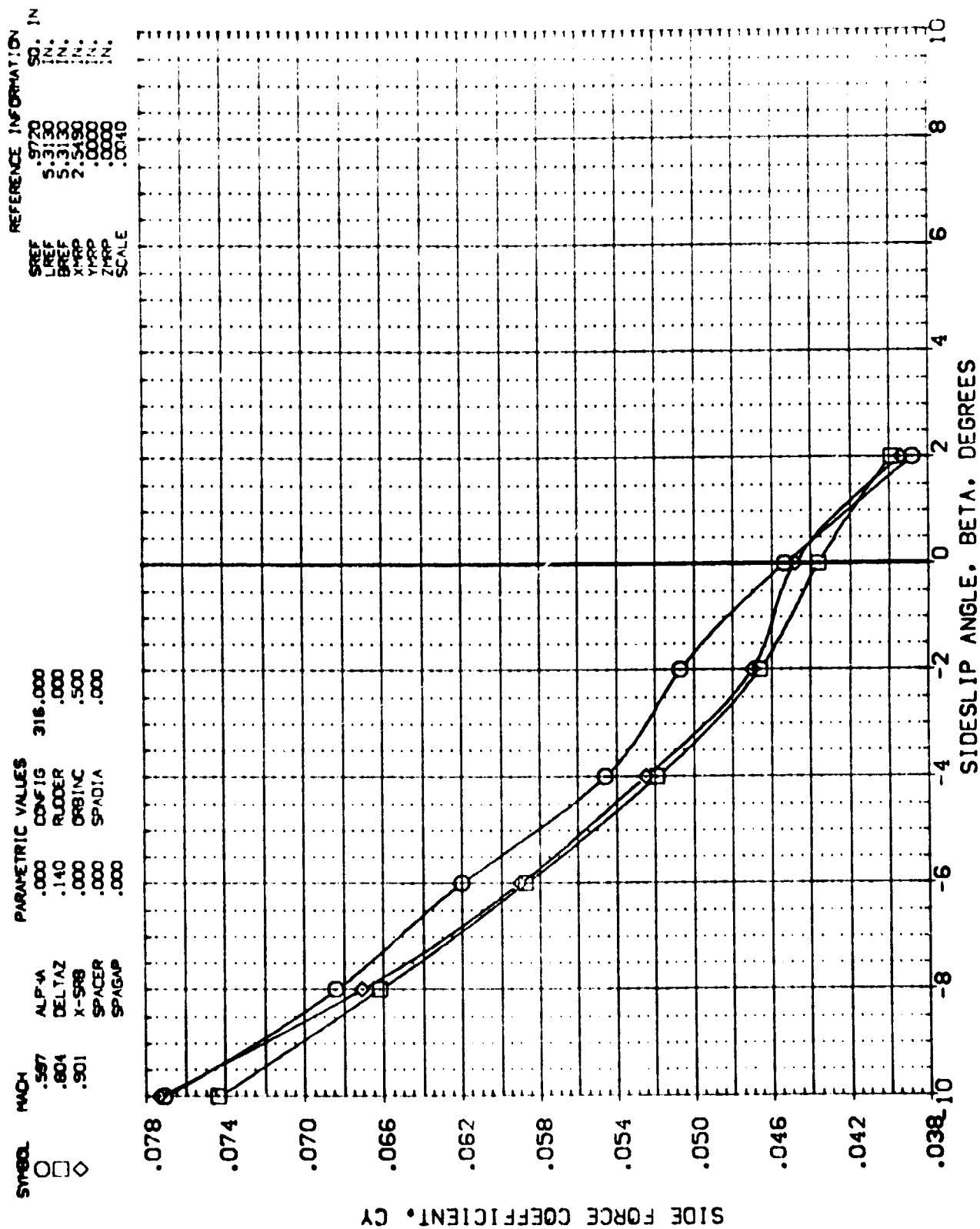
SYMBOL
□
◇



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 0 DEGREES

MSFC 570(IA31F) (S3/2)/(03)(T9)/(S3/2)

(P83566)



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK. ALPHA = 0 DEGREES

PAGE 638

(P83S66)

MSFC 570(1A31F) (S3/2)/(03)(T9)/(S3/2)

SYMBOL MAOH

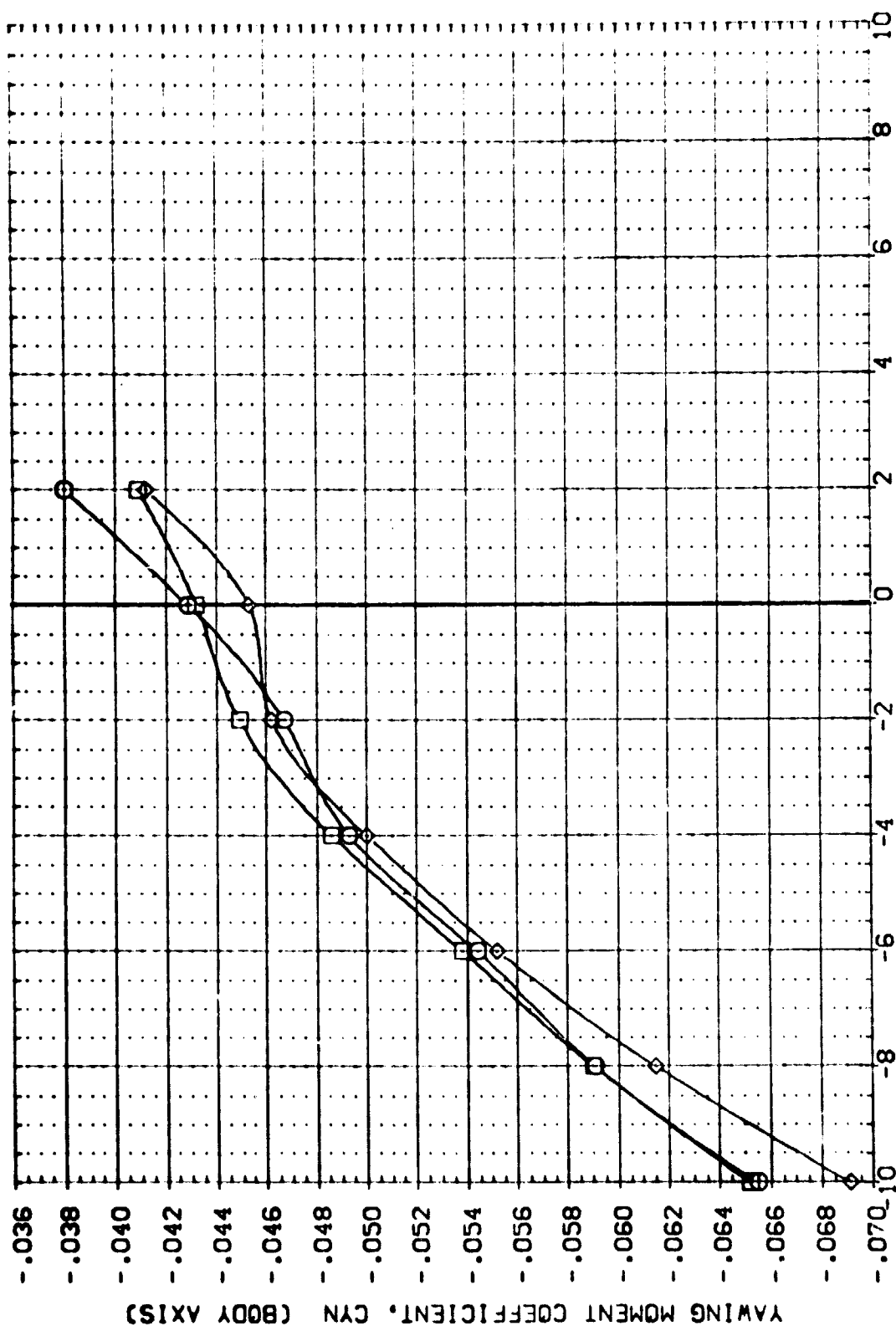
○	.587
□	.804
◇	.901

PARAMETRIC VALUES

ALPHA	.000	CONFIS	316.000
DELTAZ	.140	RUDDER	.000
X-SRB	.000	DRBINC	.500
SPACER	.000	SPADIA	.000
SPAGUP	.000		

REFERENCE INFORMATION

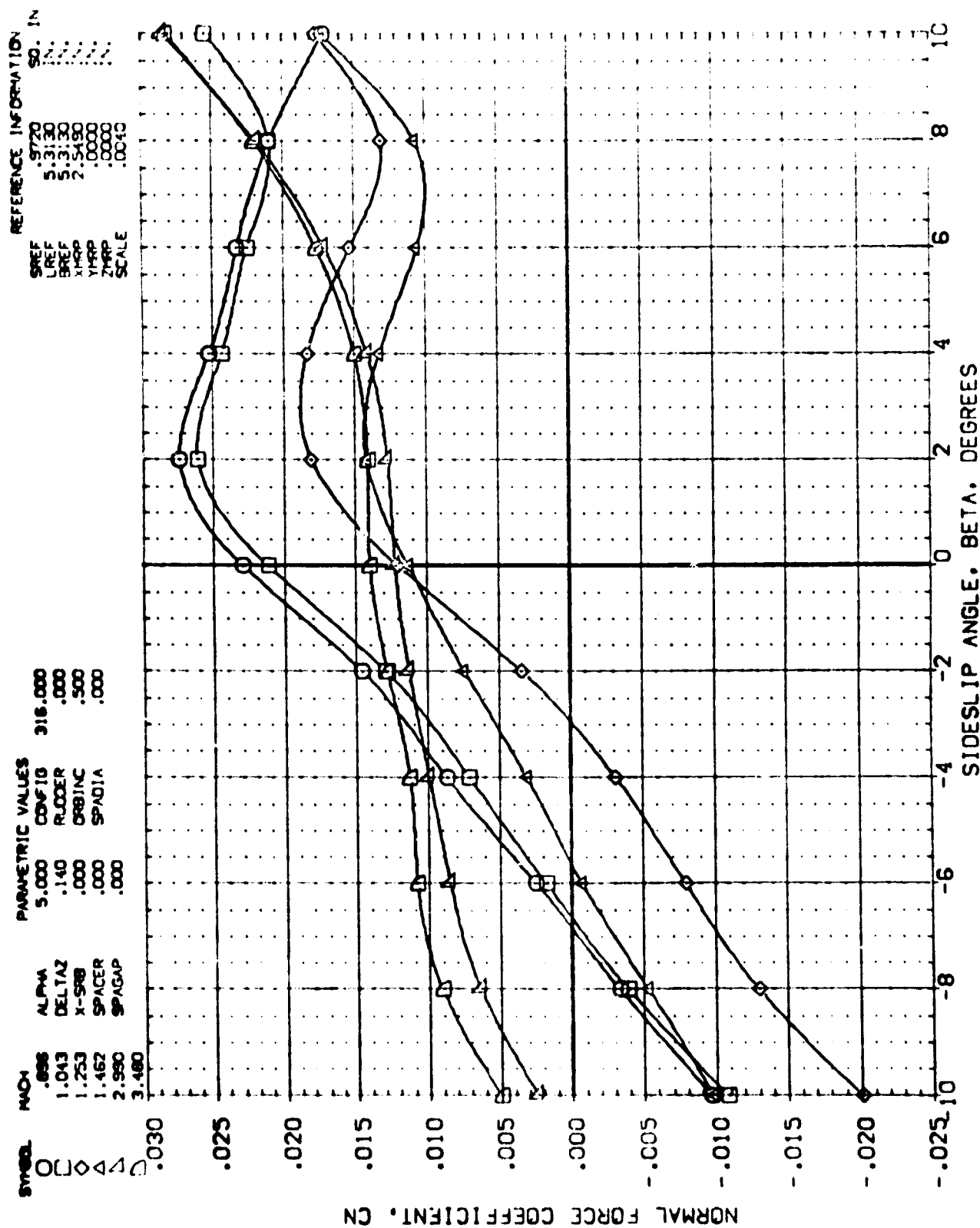
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LREF	5.3130		
BREF	5.3130		
XMRP	2.5490		
YMRP	.0000		
ZMRP	.0000		
SCALE	.0040		



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 0 DEGREES

MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

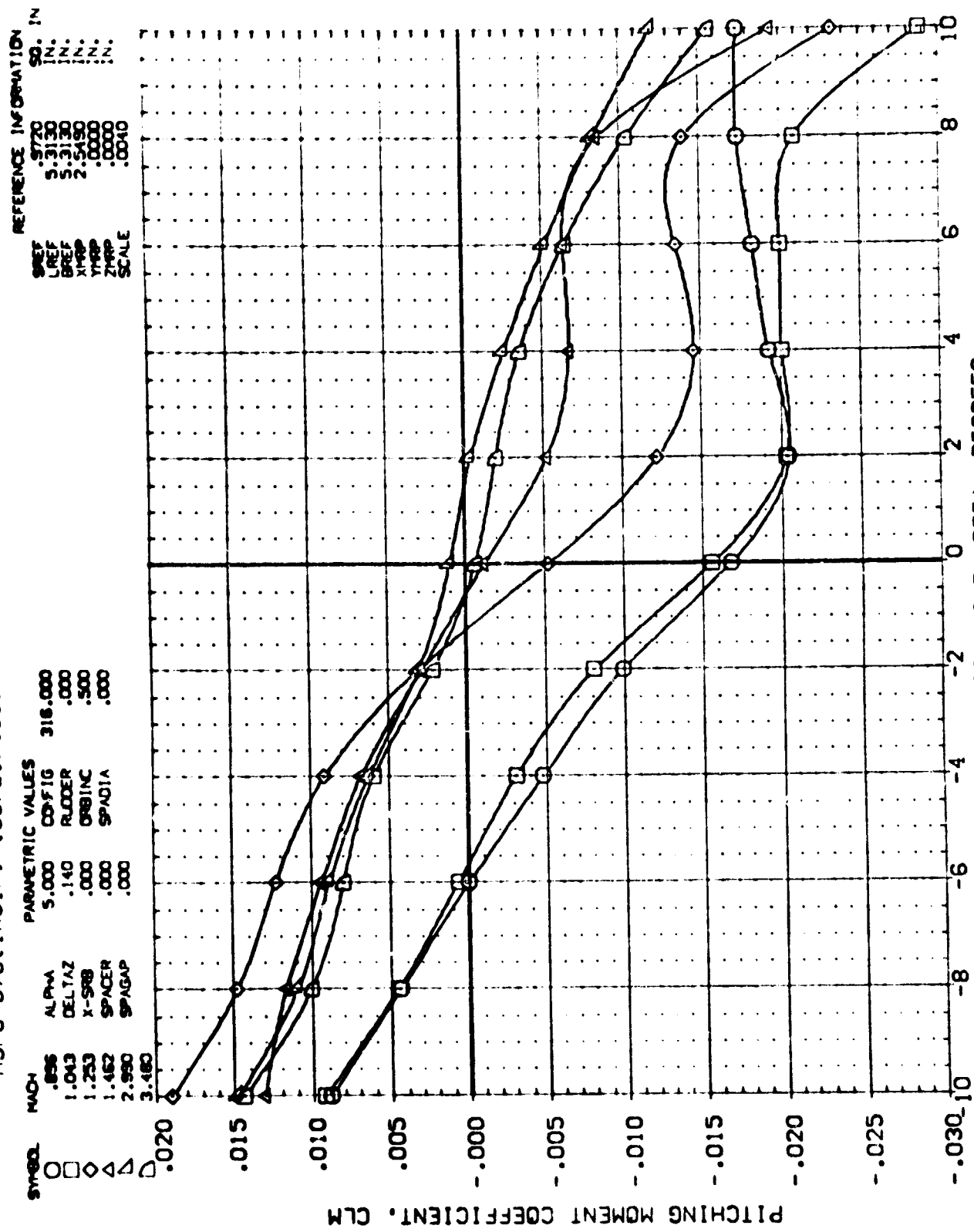
[A83568]



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK. ALPHA = 5 DEGREES

(A83568)

MSFC 570(IA31F) (S3/2)/(03)(I10)/(S3/2)



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 5 DEGREES

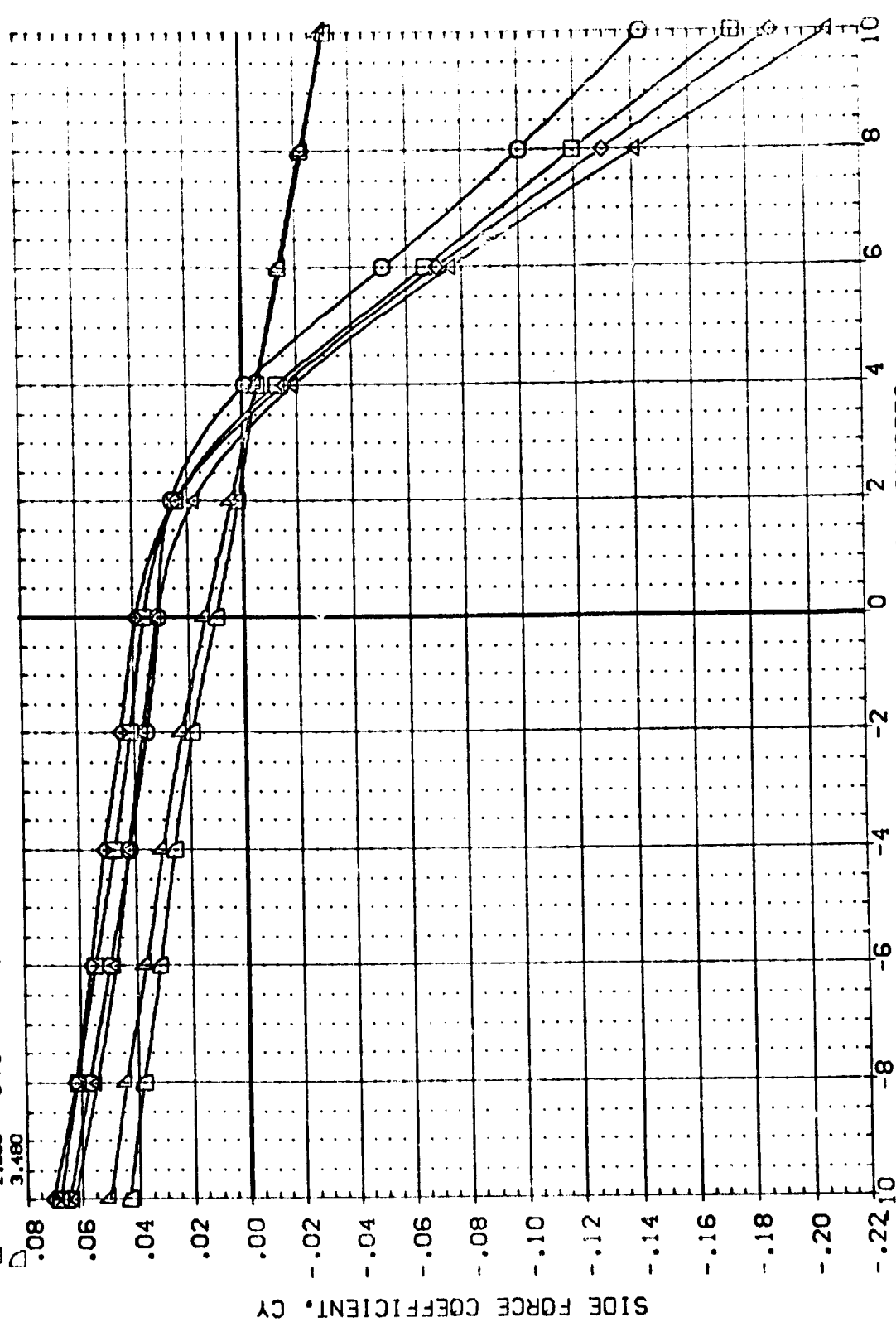
(A83S68)

MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

REFERENCE INFORMATION
SREF 9720
LREF 5.3130
BREF 5.3130
XMRP 2.5450
YMRP .0000
ZMRP .0000
SCALE .0040

PARAMETRIC VALUES
MACH ALPHA 5.000 CONFIG 316.000
1.043 DELTAZ .140 RUDDER .000
1.253 X-SRB .000 ORBINC .500
1.462 SPACER .000 SPADIA .000
2.990 SPAGAP .000
3.480

SYMBOL
□
◇
△
▽
○
●



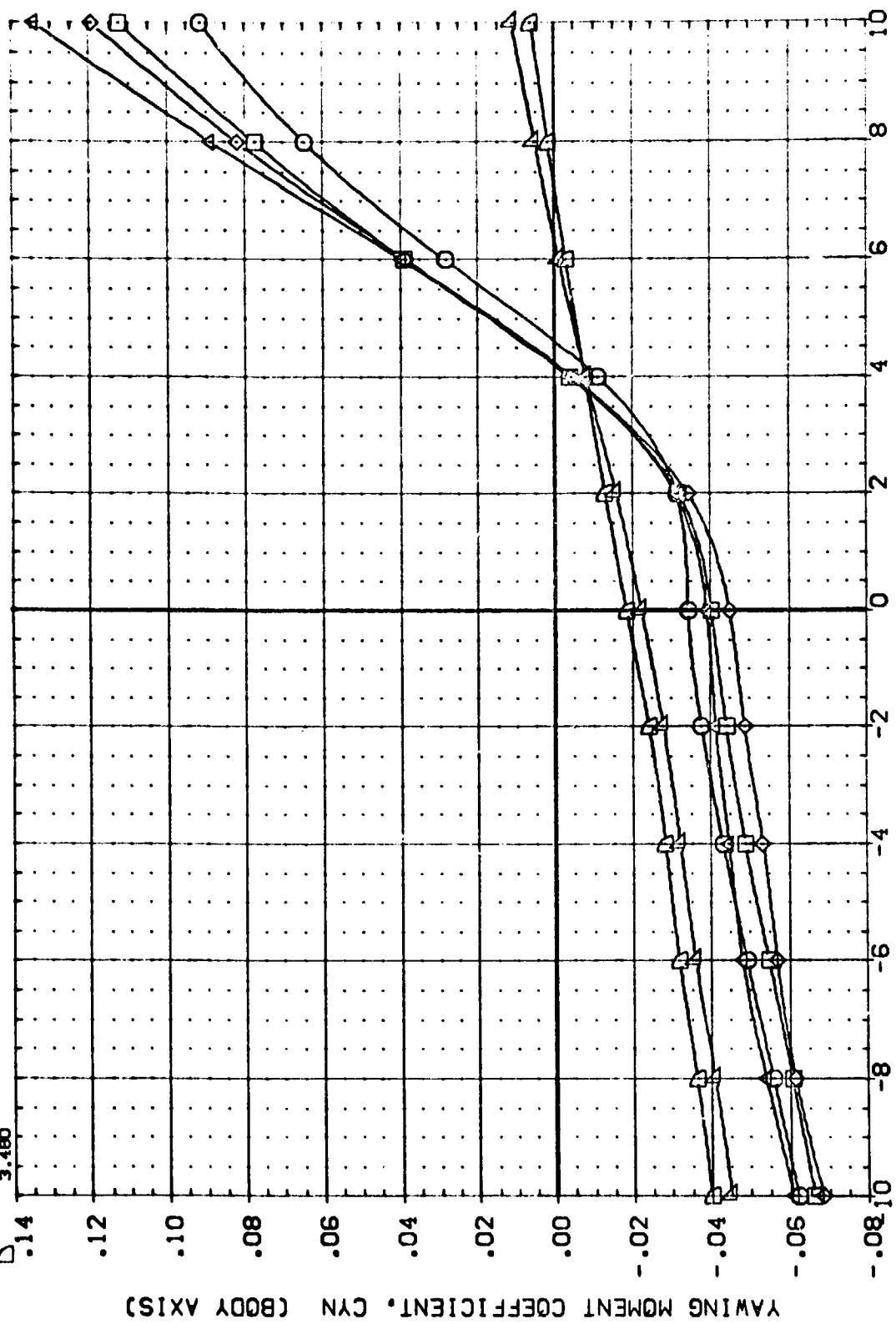
SIDESLIP ANGLE, BETA, DEGREES
LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 5 DEGREES



MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

(A83S68)

SYMBOL	PARAMETRIC VALUES					REFERENCE INFORMATION				
	MACH	ALPHA	DELTAZ	CONFIG	316.000	SREF	LREF	BREF	XMRP	YMRP
○	.686	1.043	.000	.140	.000	.9720	.3130	.3130	.0000	.0000
□	1.043	1.253	.000	.000	.500	5.3130	.3130	.3130	.0000	.0000
◇	1.253	1.462	.000	.000	.000	2.5490	.3130	.3130	.0000	.0000
△	1.462	2.950	.000	.000	.000	.0000	.3130	.3130	.0000	.0000
▽	2.950	3.480	.000	.000	.000	.0000	.3130	.3130	.0000	.0000
◇	3.480					.0040				



LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = 5 DEGREES

MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

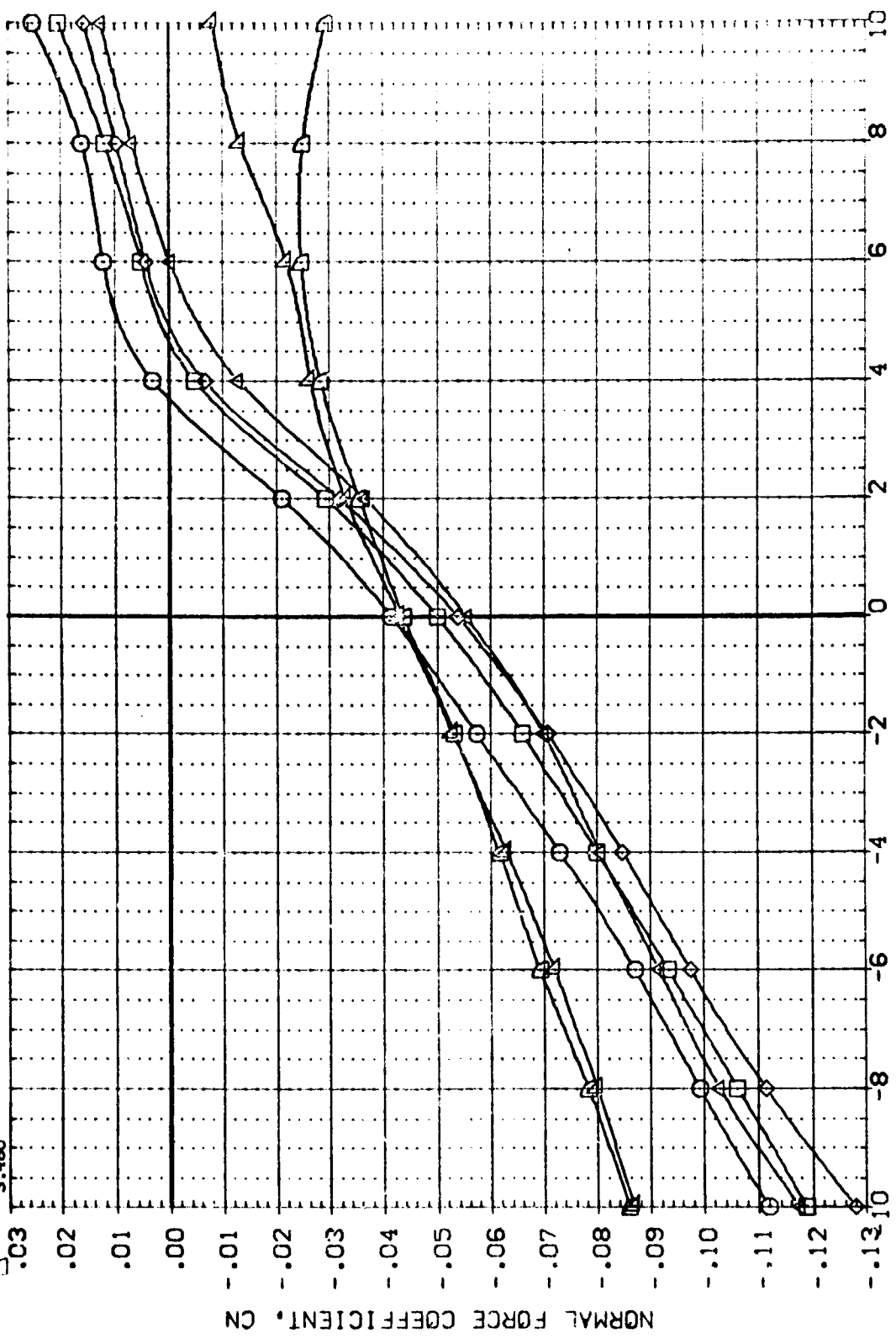
(A83S69)

REFERENCE INFORMATION
 SREF .9720
 LREF 5.3130
 SREF 5.3130
 XMRP 2.5450
 YMRP .0000
 ZMRP .0000
 SCALE .0010

PARAMETRIC VALUES
 ALPHA -5.000
 DELTAZ .140
 X-SRB .000
 SPACER .000
 SPAGAP .000

MAOH
 .895
 1.046
 1.255
 1.463
 2.990
 3.480

SYMBOL
 ○
 □
 ◇
 △
 ▽



(A83569)

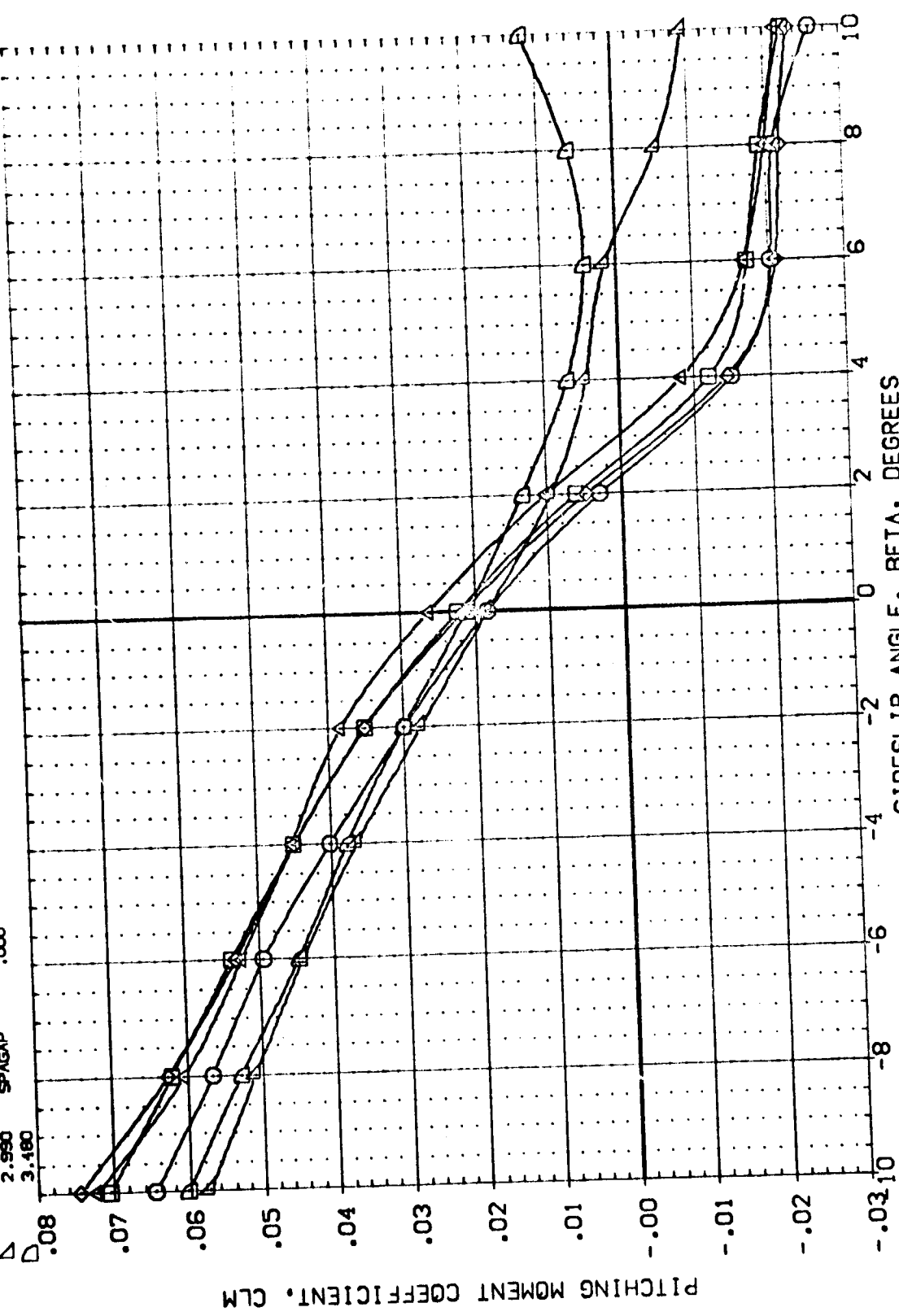
MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

REFERENCE INFORMATION
SREF .9720
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0010

PARAMETRIC VALUES
-5.000 CONFIG 316.000
.140 RUDDER .000
.000 ORBINC .500
.000 SPADIA .000

MACH ALPHA
1.046 DELTAZ
1.255 X-SRB
1.463 SPACER
2.990 SPAGAP

SYMBOL
□
◇
△
▽
△



SIDESLIP ANGLE, β , DEGREES
LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, $\alpha = -5$ DEGREES

(A83S69)

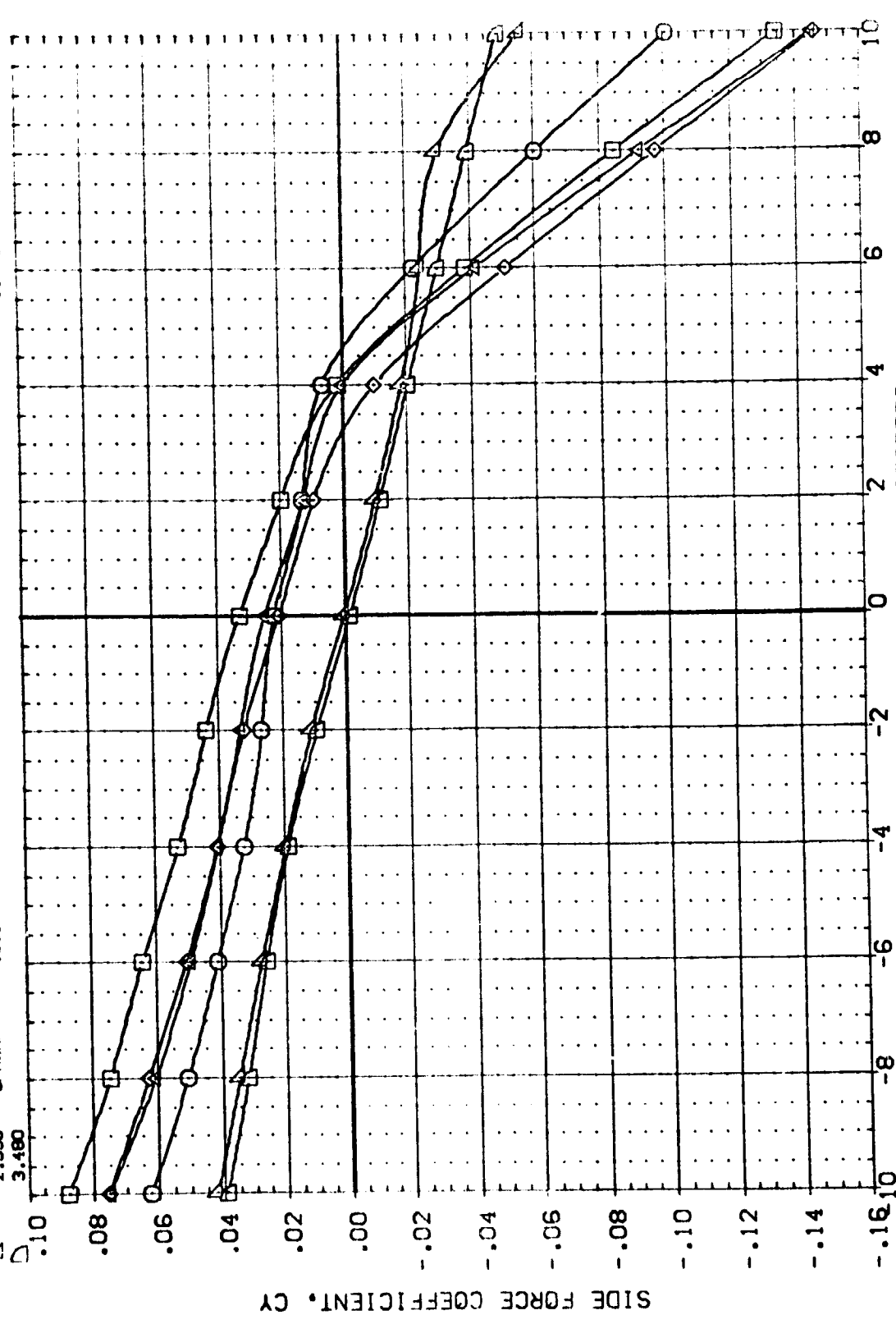
MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

REFERENCE INFORMATION
SREF 5720
LREF 5.3130
BREF 5.3130
YMRP 2.5490
ZMRP .0000
SCALE .0040

PARAMETRIC VALUES
ALPHA -5.000
DELTAZ .140
X-SRB .000
SPACER .000
SPADIA .000

MACH
.885
1.046
1.255
1.463
2.990
3.480

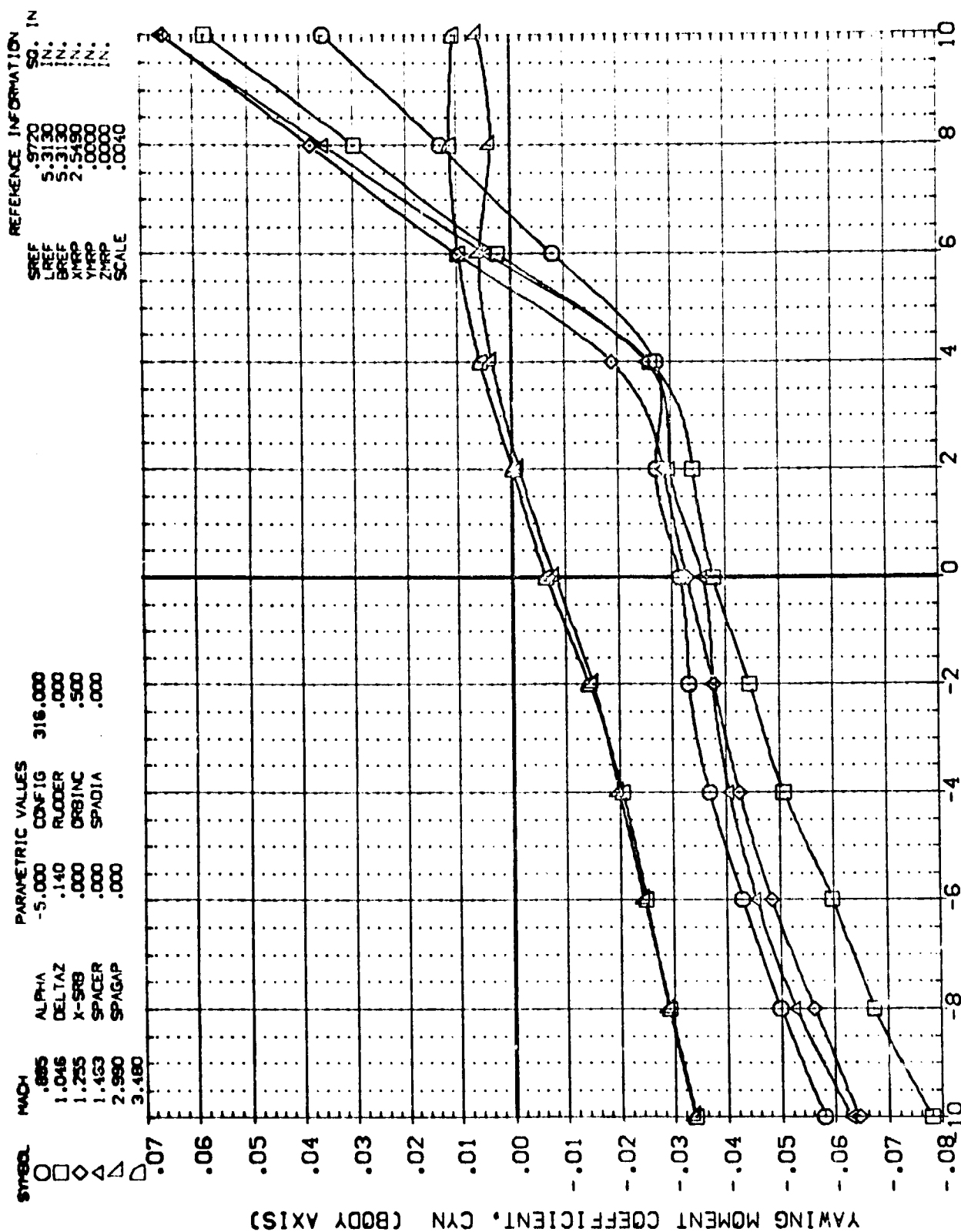
SYMBOL
□
◇
△
▽
○



SIDESLIP ANGLE, BETA, DEGREES
LEFT-SIDE SRB WITH NO STING IN EXTERNAL TANK, ALPHA = - 5 DEGREES

MSFC 570(IA31F) (S3/2)/(03)(T10)/(S3/2)

(A83569)



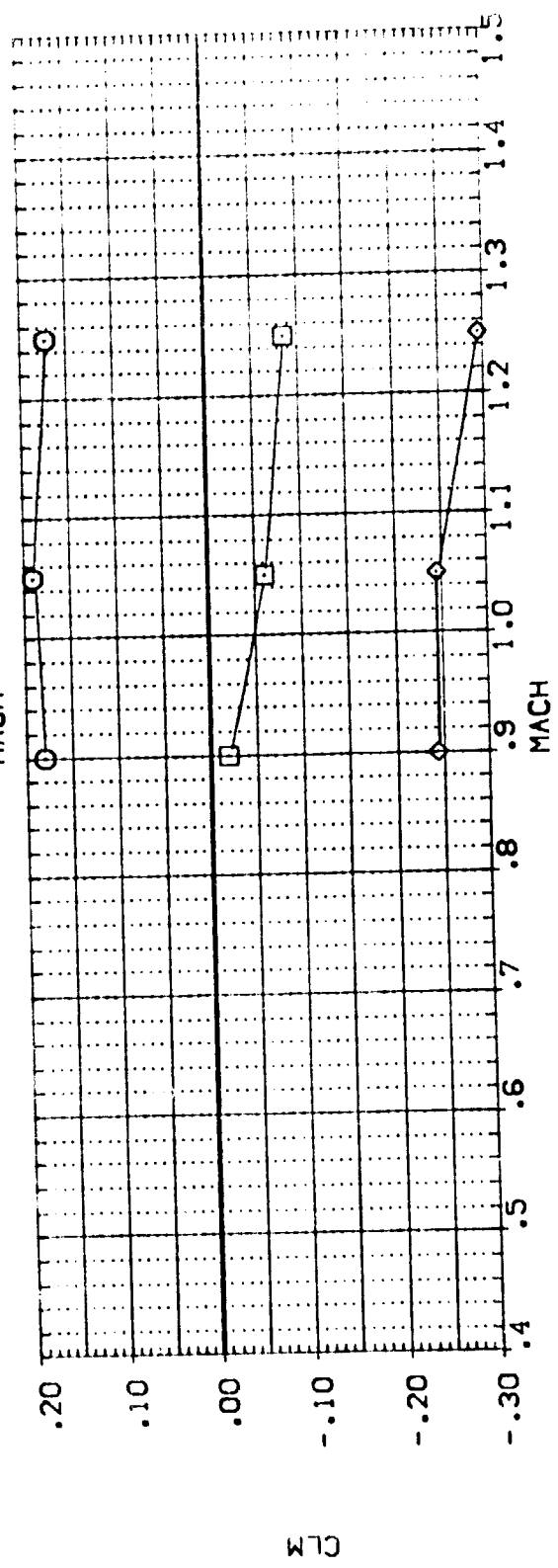
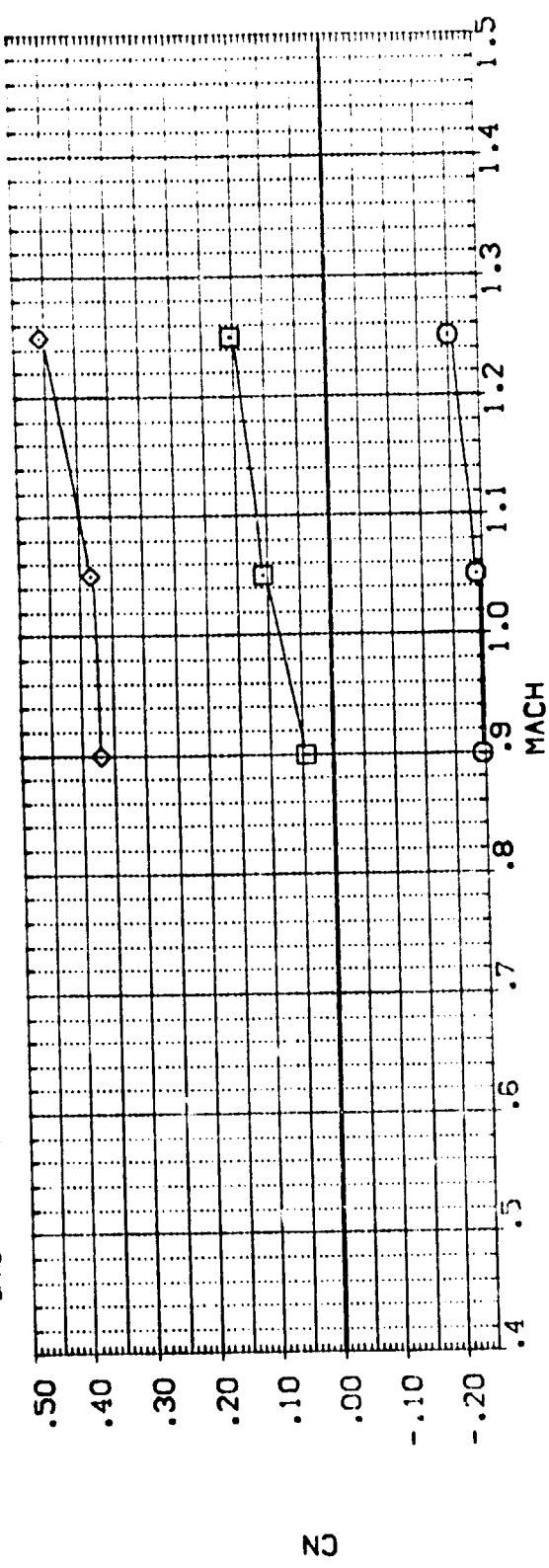
(G83070)

MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) Y1E

SYMBOL
○ □ ◇

PARAMETRIC VALUES
ALPHA -8.000 BETA .000 CONFIG 104.000
.000 DELTAZ .140 RUDDER .000
8.000 X-SRB .000 ORBITAL .500
SPACER 9.100 SPADIA .200
SPAGAP .050

REFERENCE INFORMATION
SREF 6.1980 SO. IN
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0010



FORE AND AFT SPACER ON EXTERNAL TANK. ORBITER DATA

(G83070)

MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) Y1E

Symptoms

000

ALPHA

9

PARA

PARAMETRIC VALUES

10

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REFERENCES

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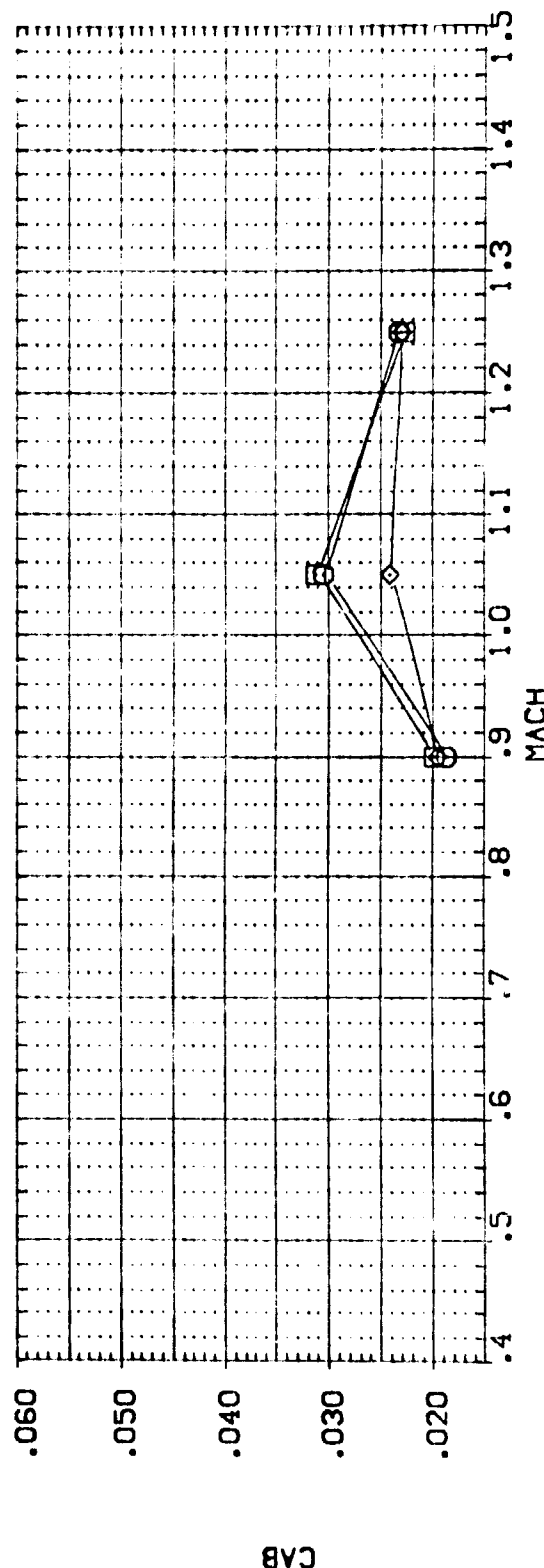
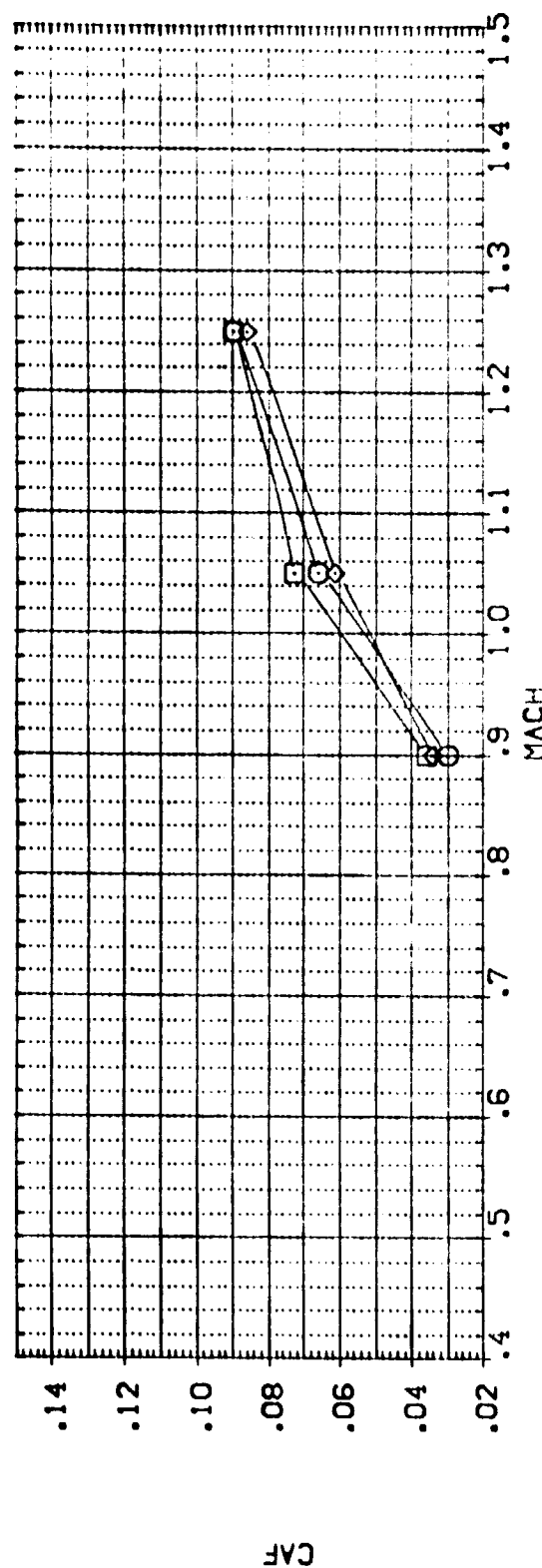
REFERENCE INFORMATION

REFERENCE INFORMATION

REFERENCE INFORMATION

REFERENCE INFORMATION

REFERENCE INFORMATION



FORE AND AFT SPACER ON EXTERNAL TANK, ORBITER DATA

MSFC 570(IA31F) (T9)/(03)/(S3/2)/(S3/2) Y1E (683170)

SYMBOL
 ○ □ ◇

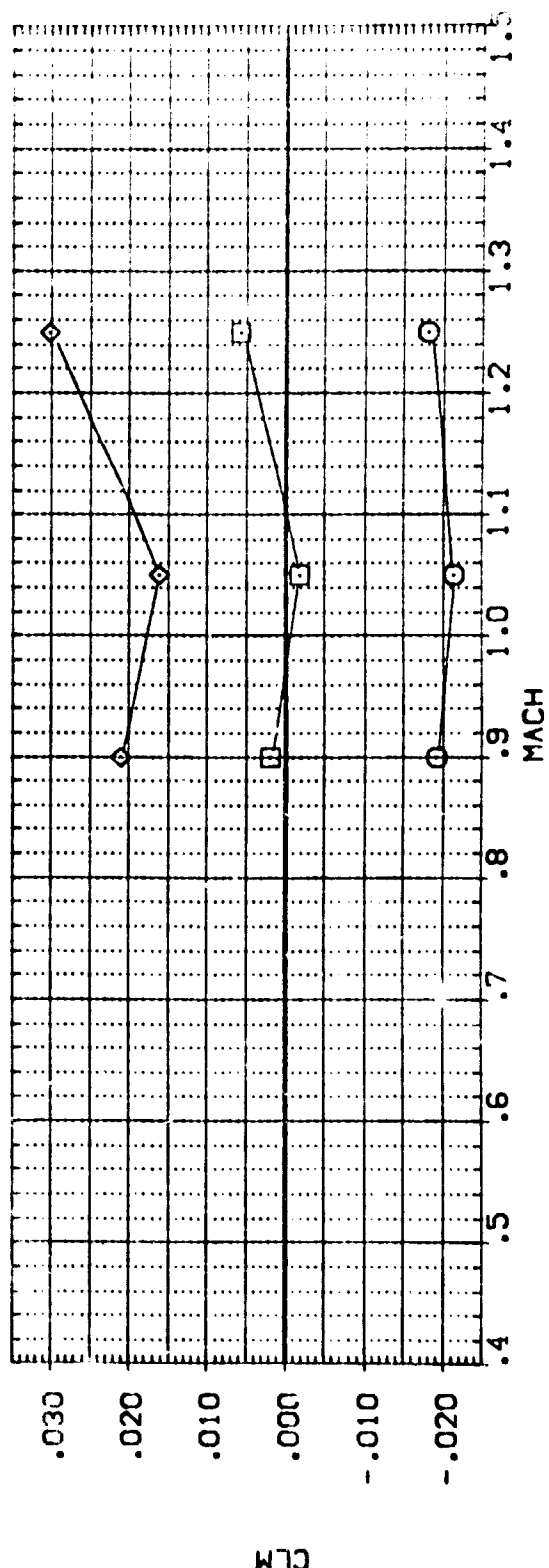
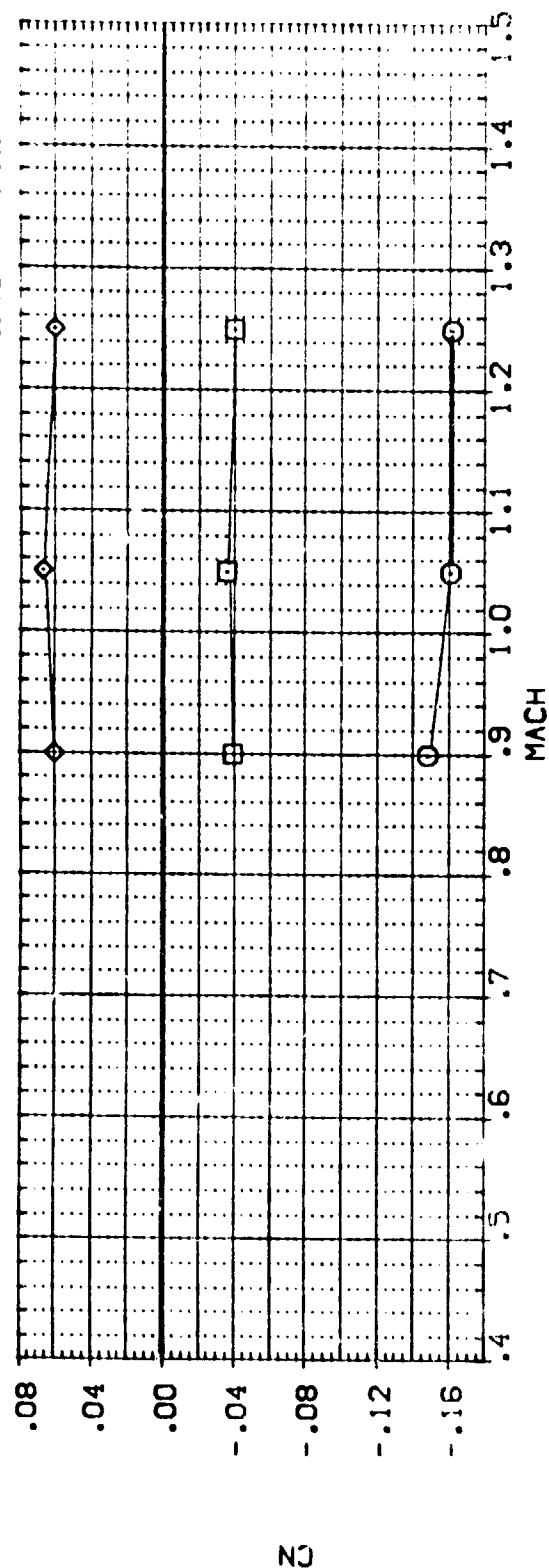
ALPHA
 -8.000
 .000
 8.000

BETA
 .000
 .140
 .000
 .000
 .050

CONFIG
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 .000
 .500
 .200

SRF
 LRREF
 BRREF
 YMRP
 ZMRP
 SCALE

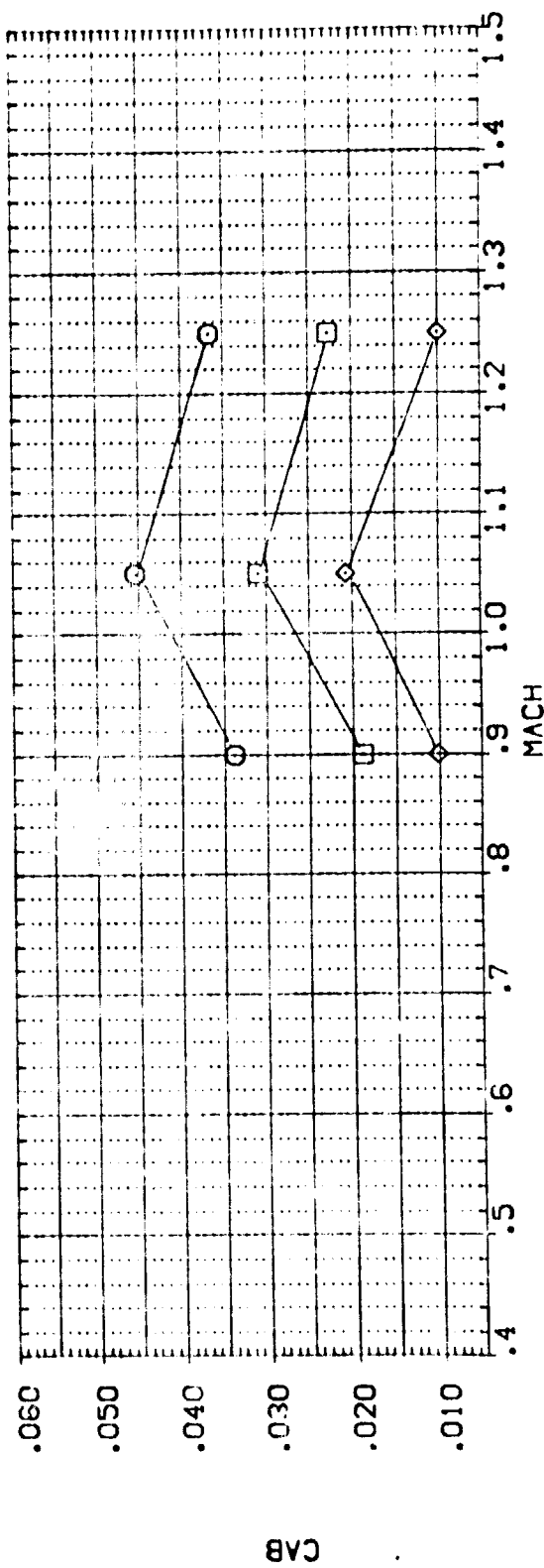
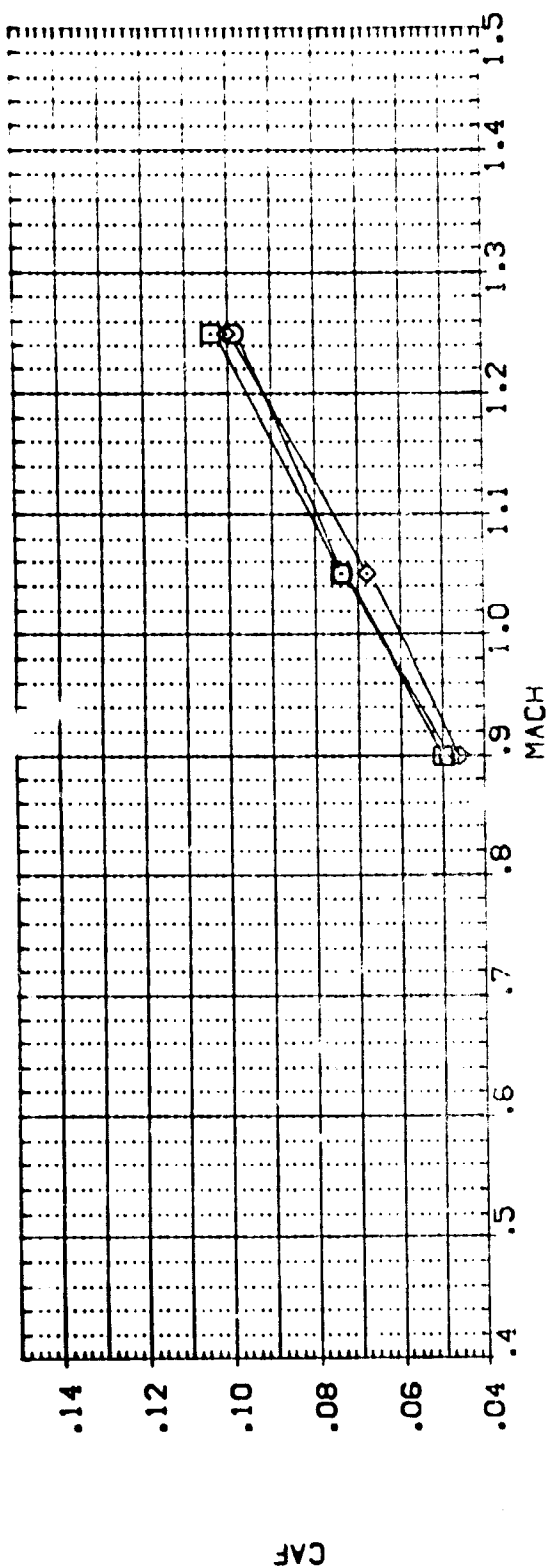
REFERENCE INFORMATION
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 5.3130
 5.3130
 2.5490
 .0000
 .0000
 .0010



FORE AND AFT SPACER ON EXTERNAL TANK, EXTERNAL TANK DATA

MSFC 570(IA31F) (19)/(03)/(S3/2)/(S3/2) Y1E (G83T70)

PARAMETRIC VALUES		REFERENCE INFORMATION	
ALPHA	BETA	SREF	SG. IN
-8.000	.000	LREF	5.3130
.000	.140	BREF	5.3130
8.000	.000	XMRP	2.5450
	9.100	YMRP	.0000
	SPADIA	ZMRP	.0000
	.050	SCALE	.0040



FORE AND AFT SPACER ON EXTERNAL TANK, EXTERNAL TANK DATA

(G83072)

MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) Y10

SYMBOL
 □
 ◇

ALPHA
 -8.000
 .000
 8.000

BETA
 .000
 .140
 .000

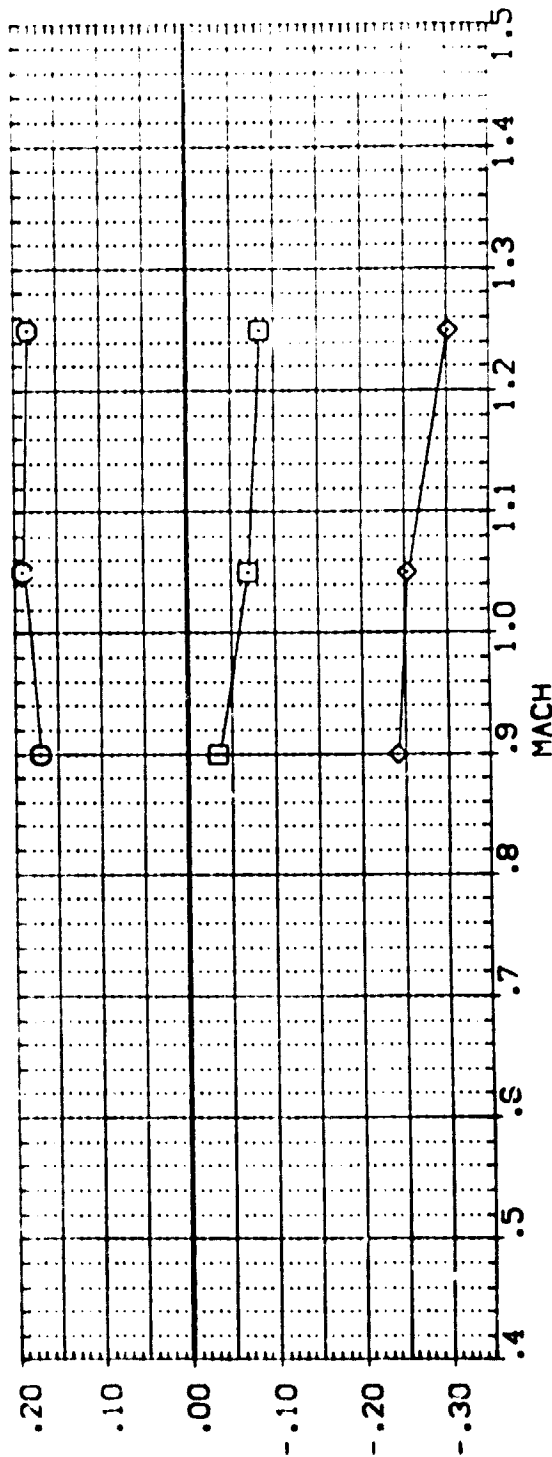
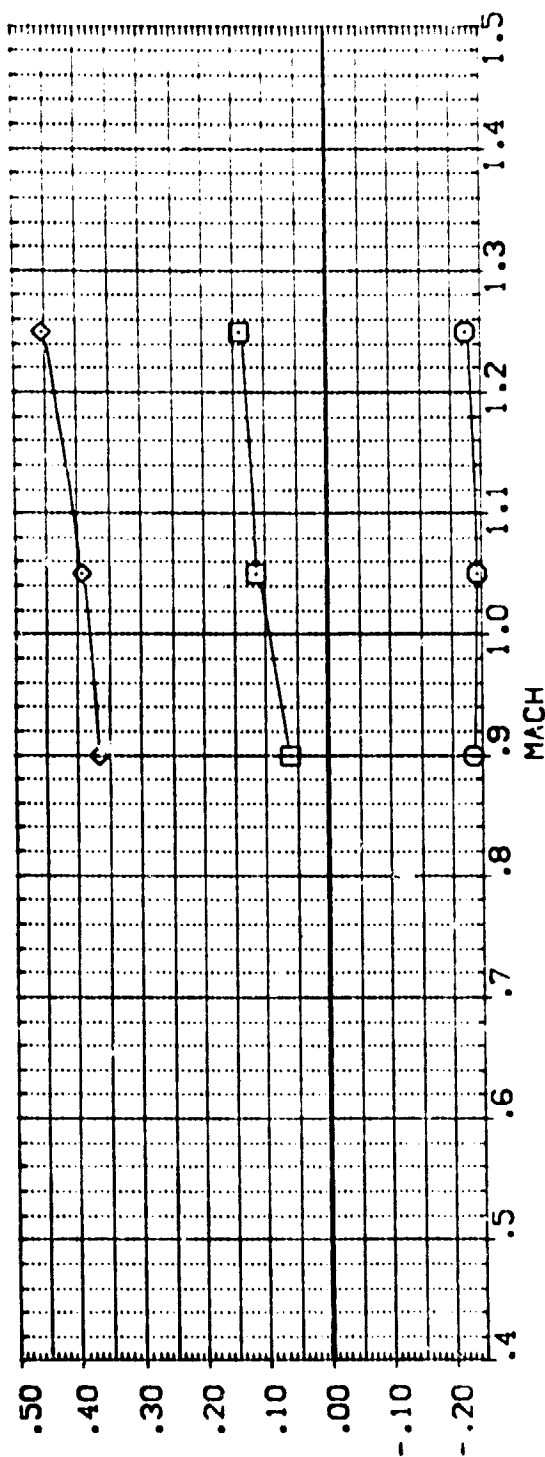
DELTA Z
 X-SRB
 SPACER
 SPAGAP

PARAMETRIC VALUES
 .000
 .140
 .000
 21.220
 .050

CONFIG
 RUDDER
 ORBITAL
 SPADIA

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0010

SO. IN
 1.2
 1.2
 1.2
 1.2
 1.2



FORE AND AFT SPACER ON ORBITER, ORBITER DATA

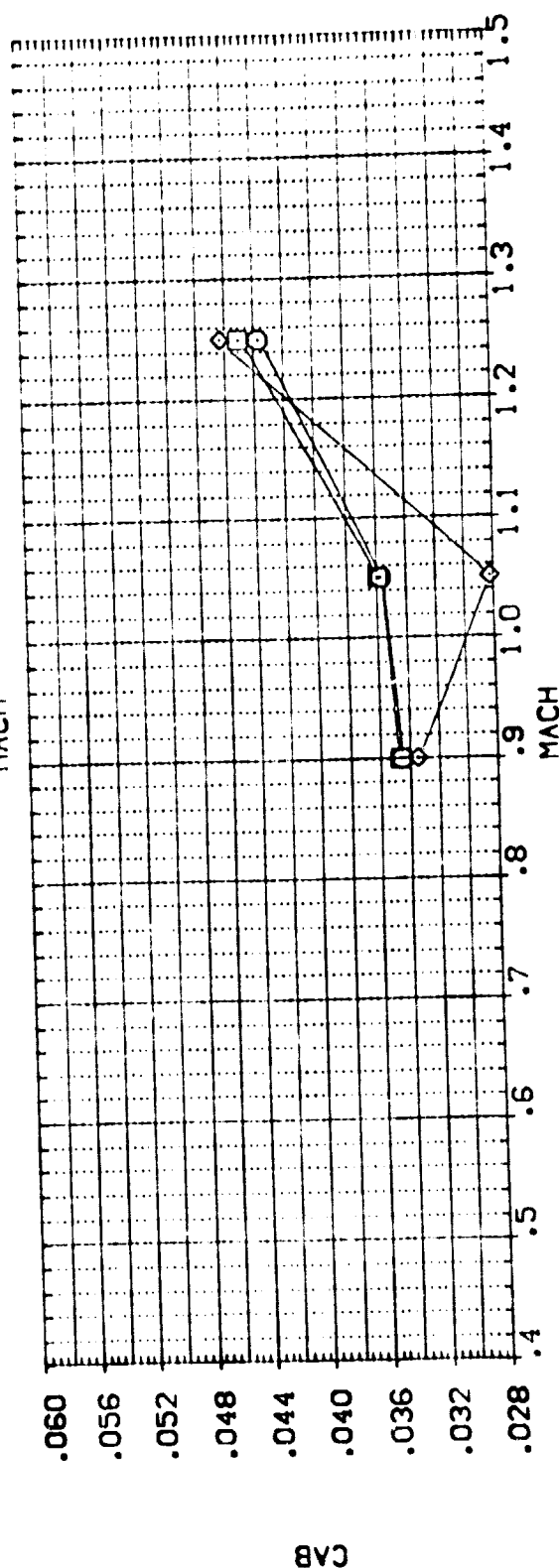
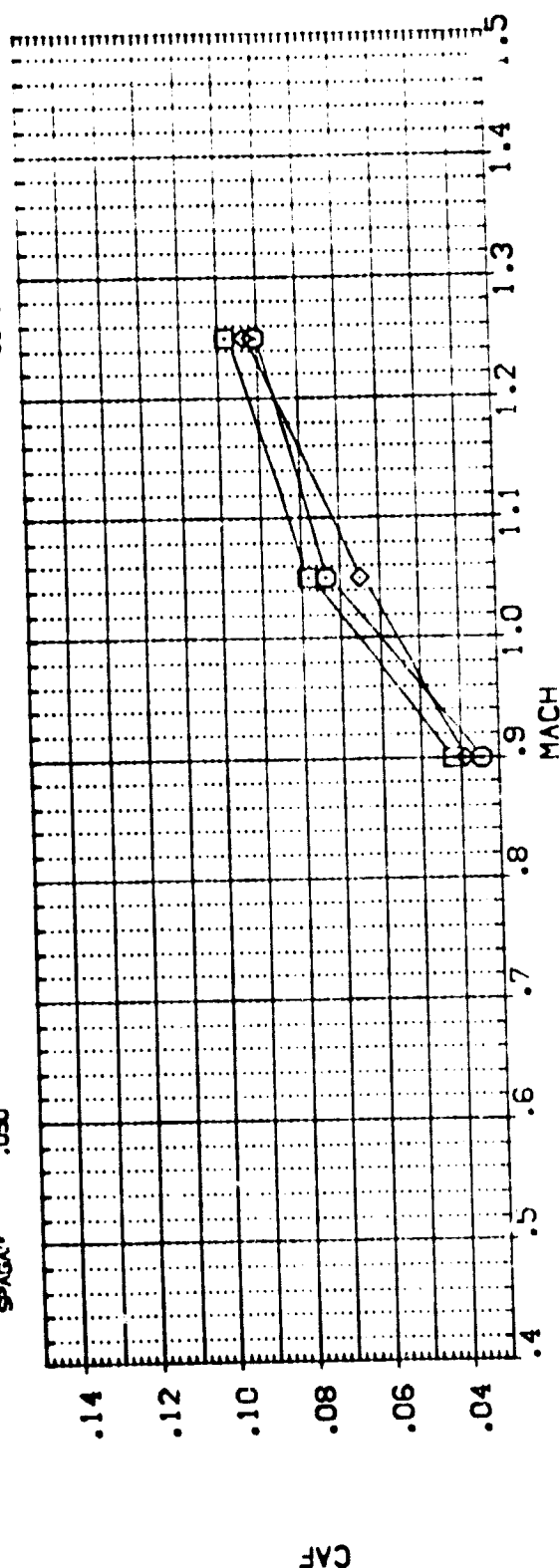
(G83072)

MSFC 570(1A31F)(03)/(19)/(S3/2)/(S3/2) Y10

REFERENCE INFORMATION
 SREF 6.1980
 LR F 5.3130
 BR F 5.3130
 YR 2P 2.5490
 YR 1P .0000
 ZYR 2P .0000
 ZYR 1P .0010
 SCALE

PARAMETRIC VALUES
 BETA .000 CONFIG 109.000
 DELTAZ .000 RUDDER .000
 X-S98 .000 ORBINC .500
 SPACER 21.220 SPADIA .200
 SPAGA .050

SYMBOL
 □
 ◇



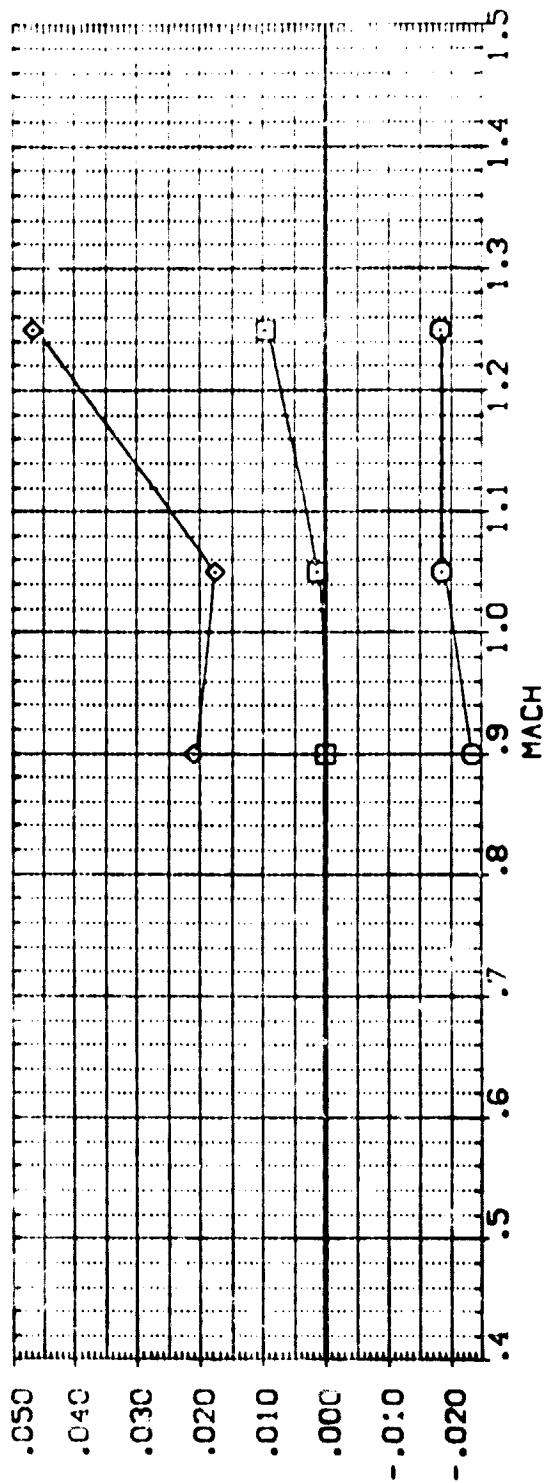
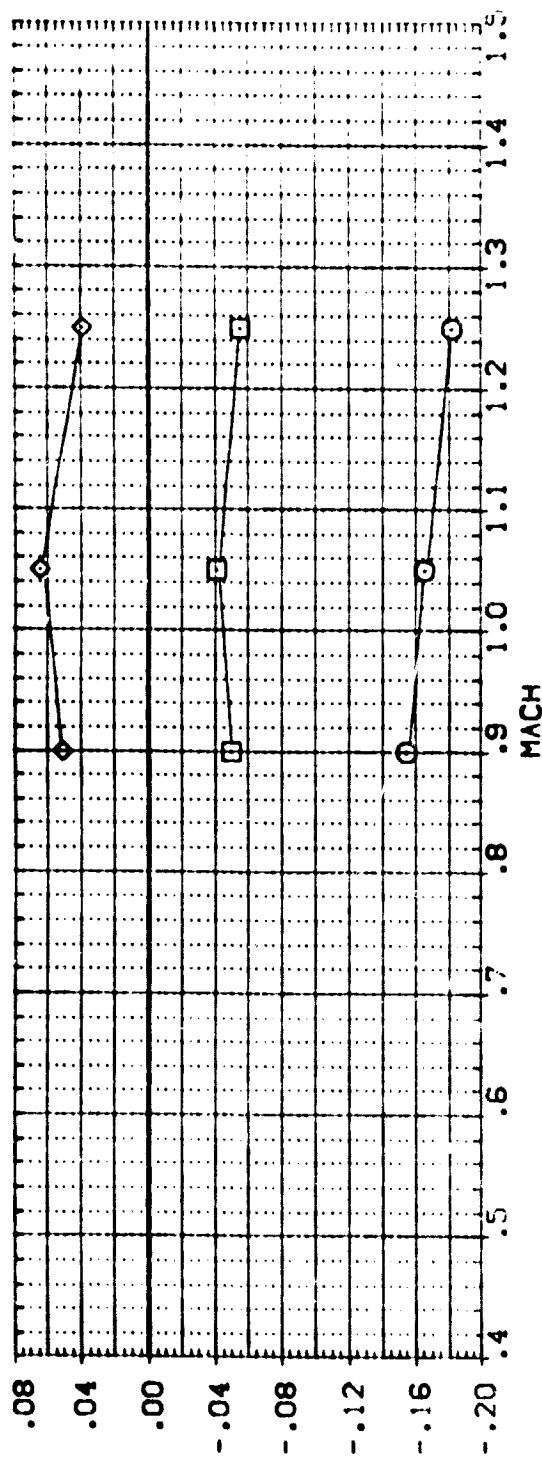
FORE AND AFT SPACER ON ORBITER, ORBITER DATA

MSFC 570(1A31F) (T9)/(03)/(S3/2)/(S3/2) Y10 (G83T72)

SYMBOL
 ○ □ ◇

PARAMETRIC VALUES
 BETA .000 CONF IG 209.000
 DELTA Z .000 RUDDER .000
 X-S98 .000 ORB INC .500
 SPACER 21.220 SPADIA .200
 SPAGAP .050

REFERENCE INFORMATION
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 BREF 5.3130
 X-REF 2.5450
 Y-REF .0000
 Z-REF .0000
 SCALE .0010



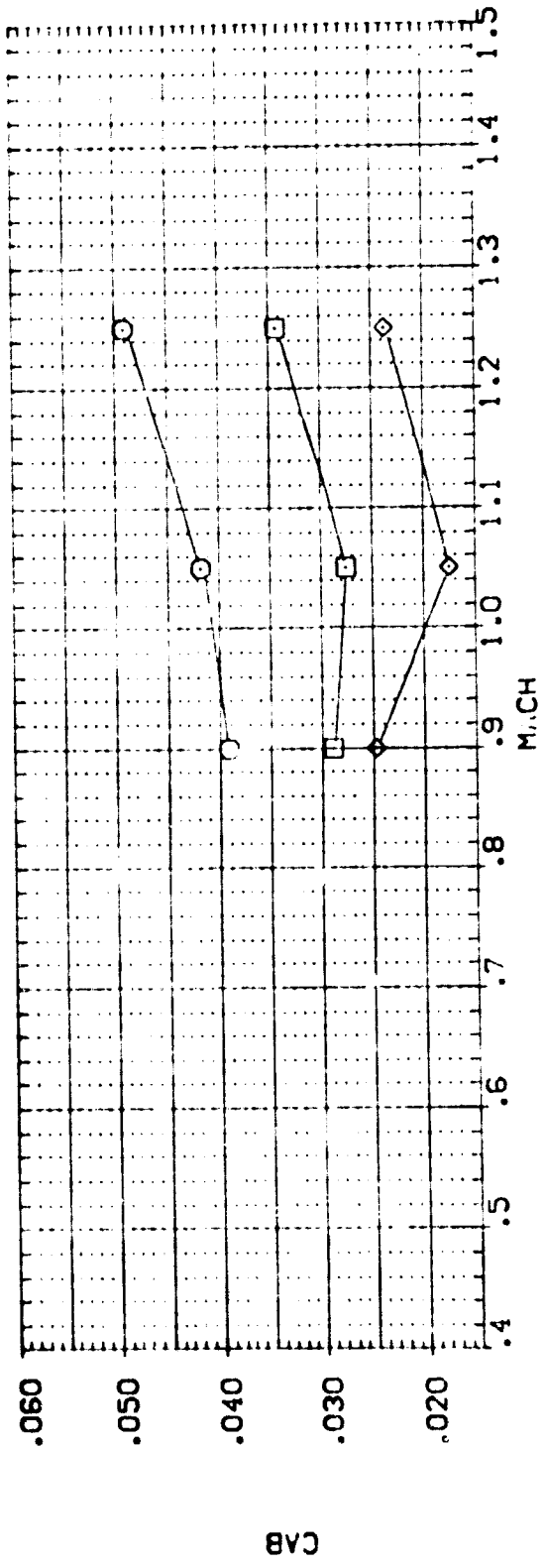
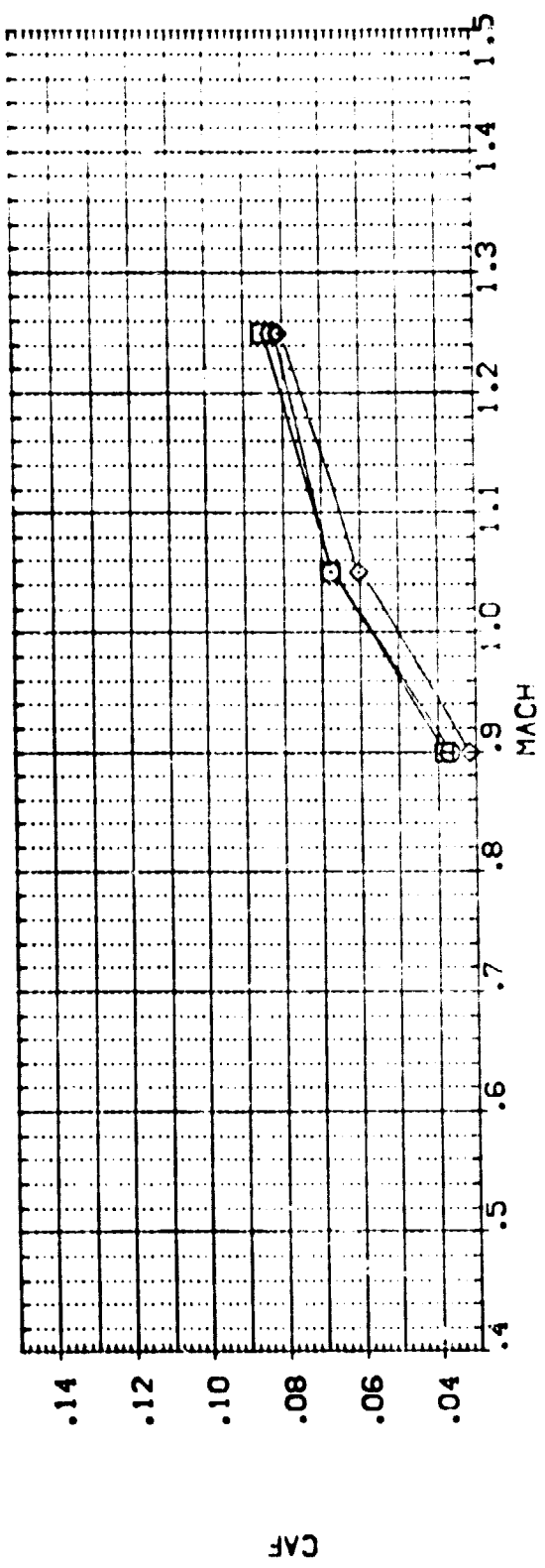
FORE AND AFT SPACER ON ORBITER, EXTERNAL TANK DATA

MSFC 570(IA31F) (T9)/(03)/(S3/2)/(S3/2) Y10 (G83T72)

SYMBOL	ALPHA	BETA	DELTAZ	SPACER	SPACAP
○	-8.000	.000	.000	21.220	.050
□	8.000	.000	.000	.000	.000
◇		.140	.000	.000	.000

PARAMETRIC VALUES	CONF IG	209.000
RUDER	.000	.000
ORBIT INC	.500	.200
SCALE	.0040	

REFERENCE INFORMATION	SG. IN
SREF	6.1980
LREF	5.3130
BREF	5.3130
XREF	2.5490
YREF	.0000
ZREF	.0000
SCALE	.0040



FORE AND AFT SPACER ON ORBITER, EXTERNAL TANK DATA

(G83071)

MSFC 570(IA31F)(03)/(19)/(S3/2)/(S3/2) Y1E

SYMBOL
 ○
 □
 ◇

BETA

-8.000
 .000
 8.000

ALPHA

DELTAZ
 X-SRB
 SPACER

PARAMETRIC VALUES

.000
 .140
 .000
 9.100
 .050

CONFIG

RUDDER
 ORBINC
 SPADIA

104.000
 .000
 .500
 .200

SCALE

Y1E

(S3/2)

(S3/2)

(G83071)

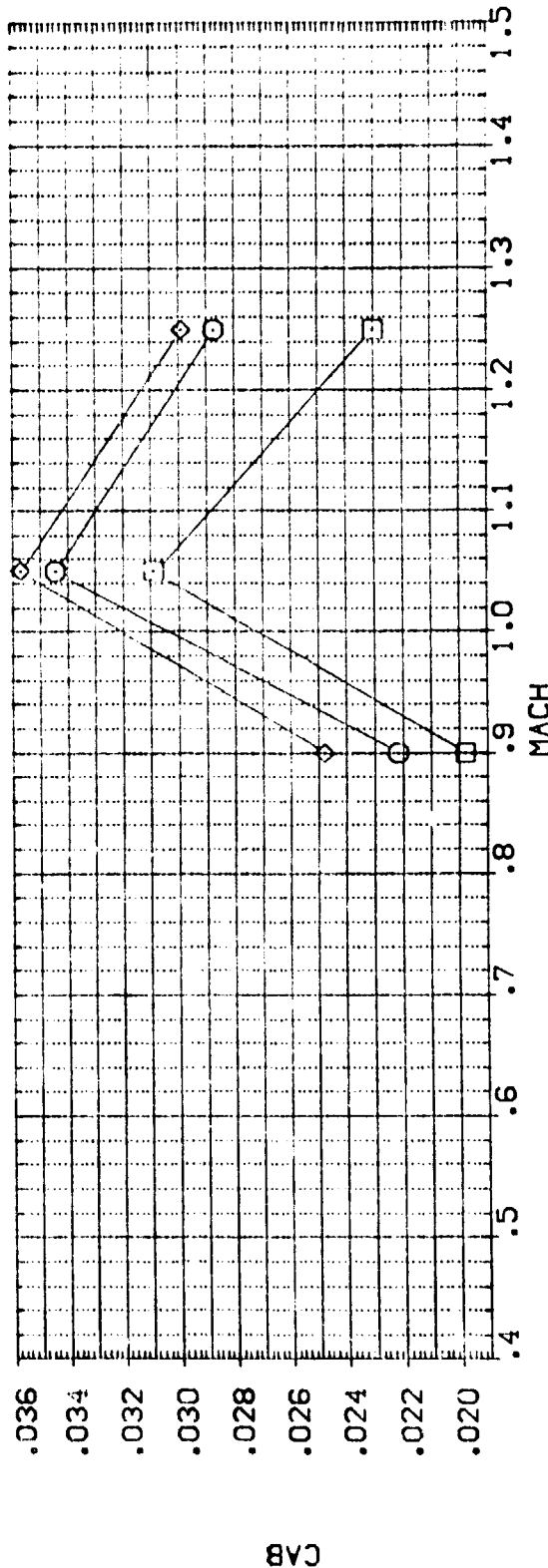
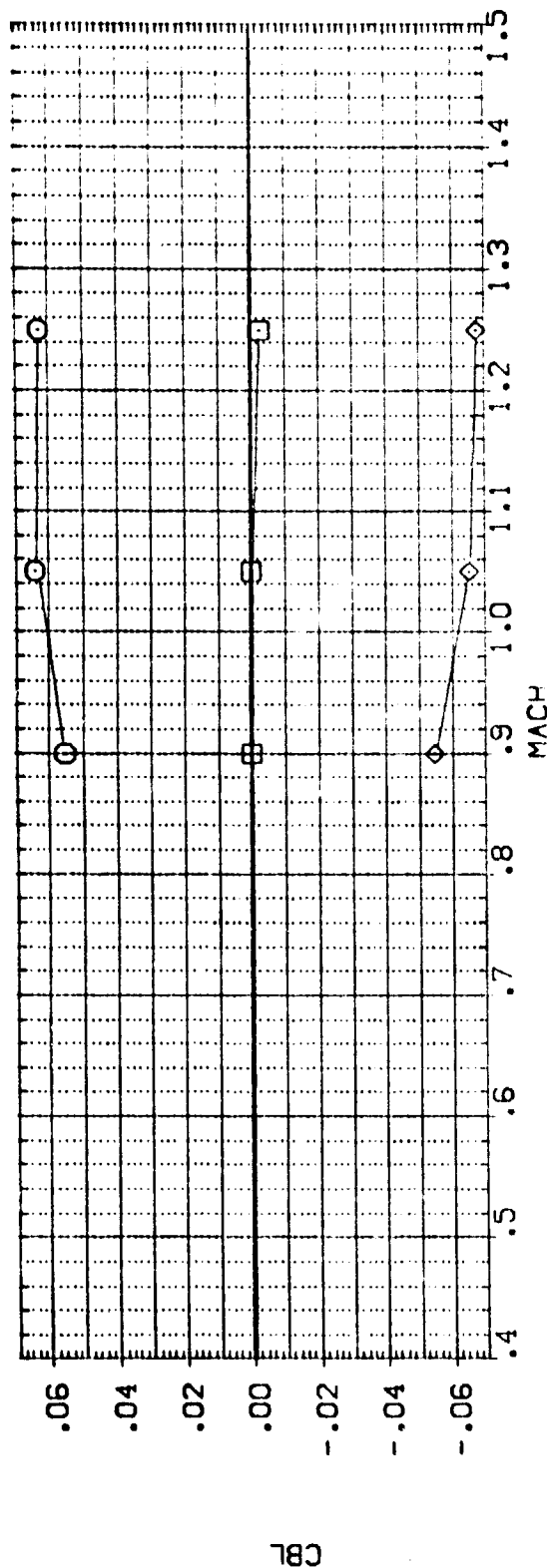
REFERENCE INFORMATION

SREF
 LREF
 BREF
 XREF
 YREF
 ZREF
 SCALE

6.1980
 5.3130
 5.3130
 2.5450
 .0000
 .0000
 .0040

IN

IN
 IN
 IN
 IN
 IN
 IN



FORE AND AFT SPACER ON EXTERNAL TANK, ORBITER DATA

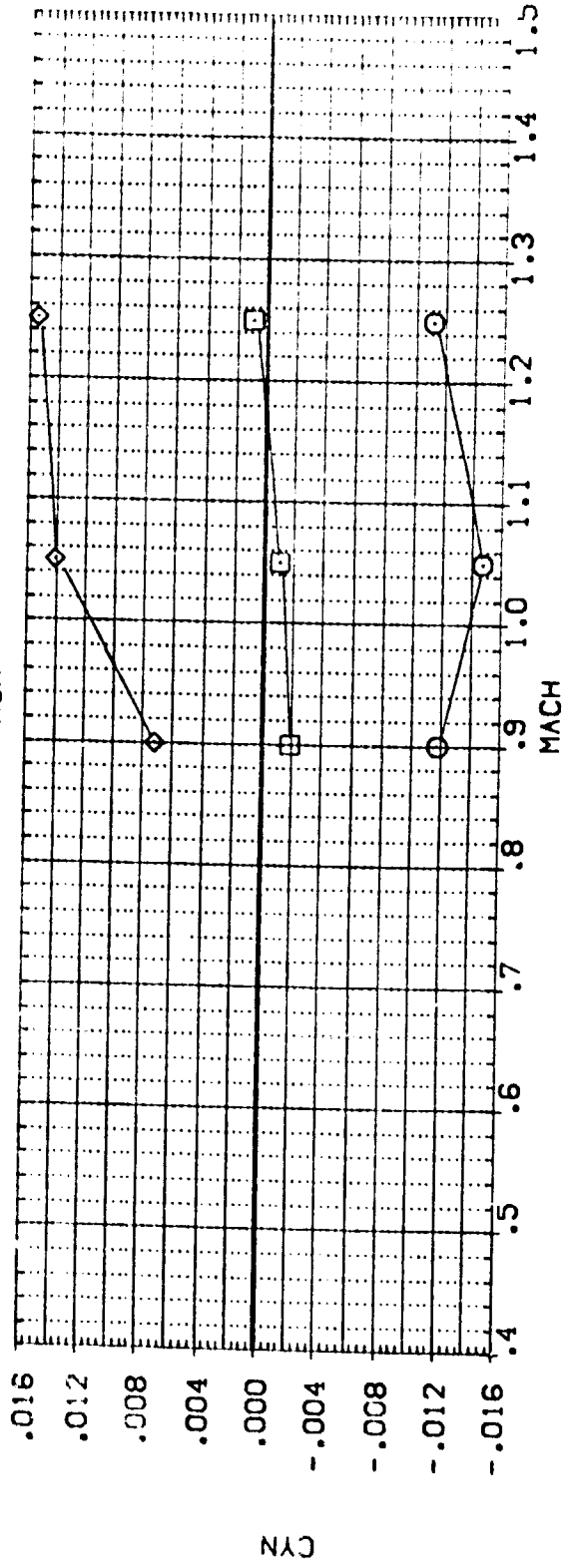
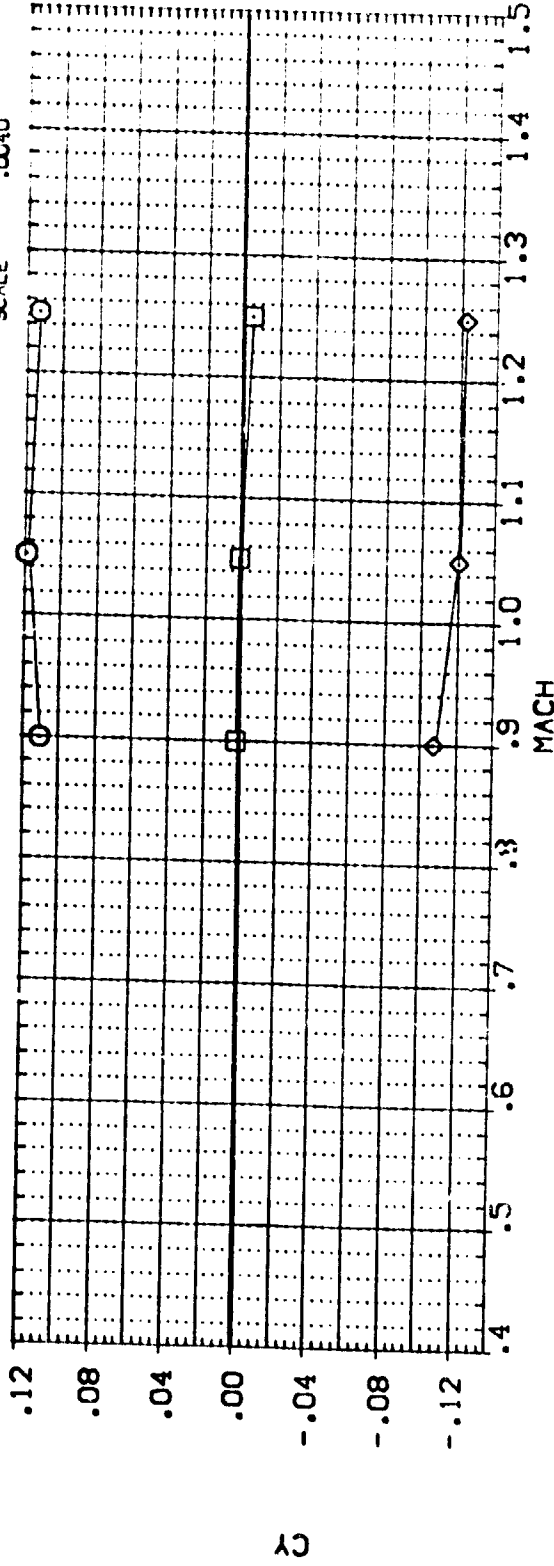
MSFC 570(1A31F) (19)/(03)/(S3/2)/(S3/2) Y1E (G83T71)

SYMBOL
○ □ ◇

BETA
-8.000
.000
8.000

PARAMETRIC VALUES
ALPHA .000 CONF IG 204.000
DELTA Z .140 RUDDER .000
X-SRB .000 ORB INC .500
SPACER 9.100 SP/DIA .200
SPAGAP .050

REFERENCE INFORMATION
SREF 6.1980 SO. IN
LREF 5.3130 IN.
BREF 5.3130 IN.
XMRP 2.5490 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0010

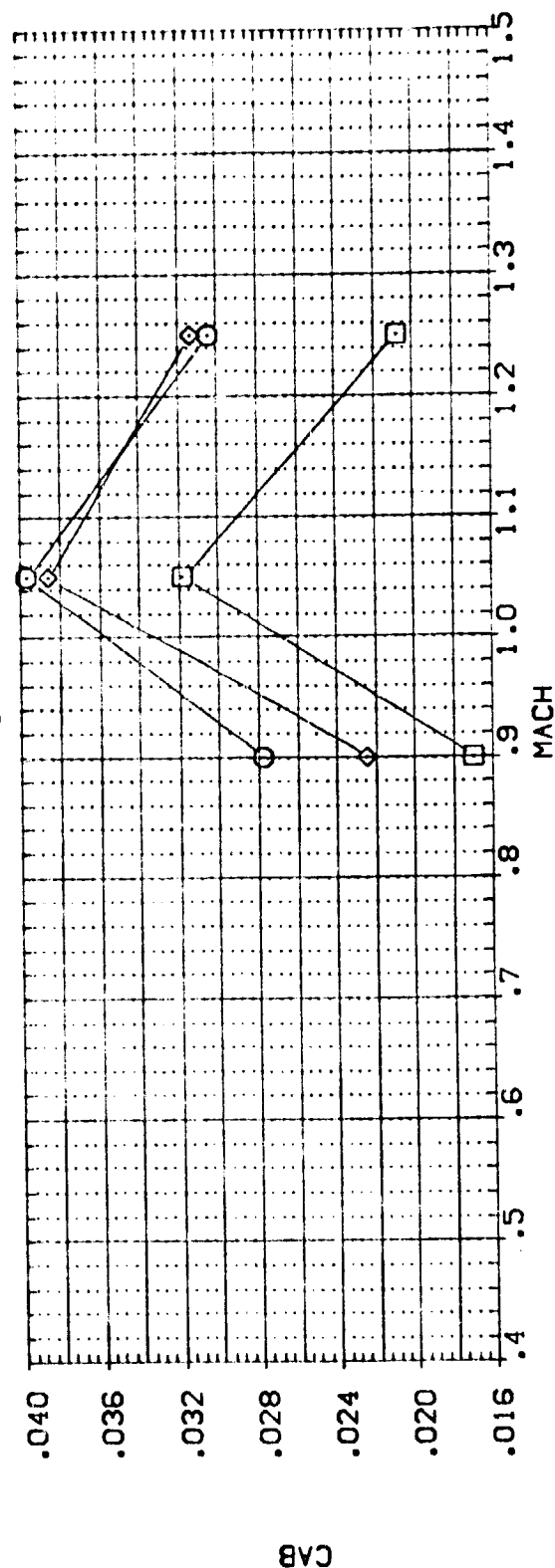
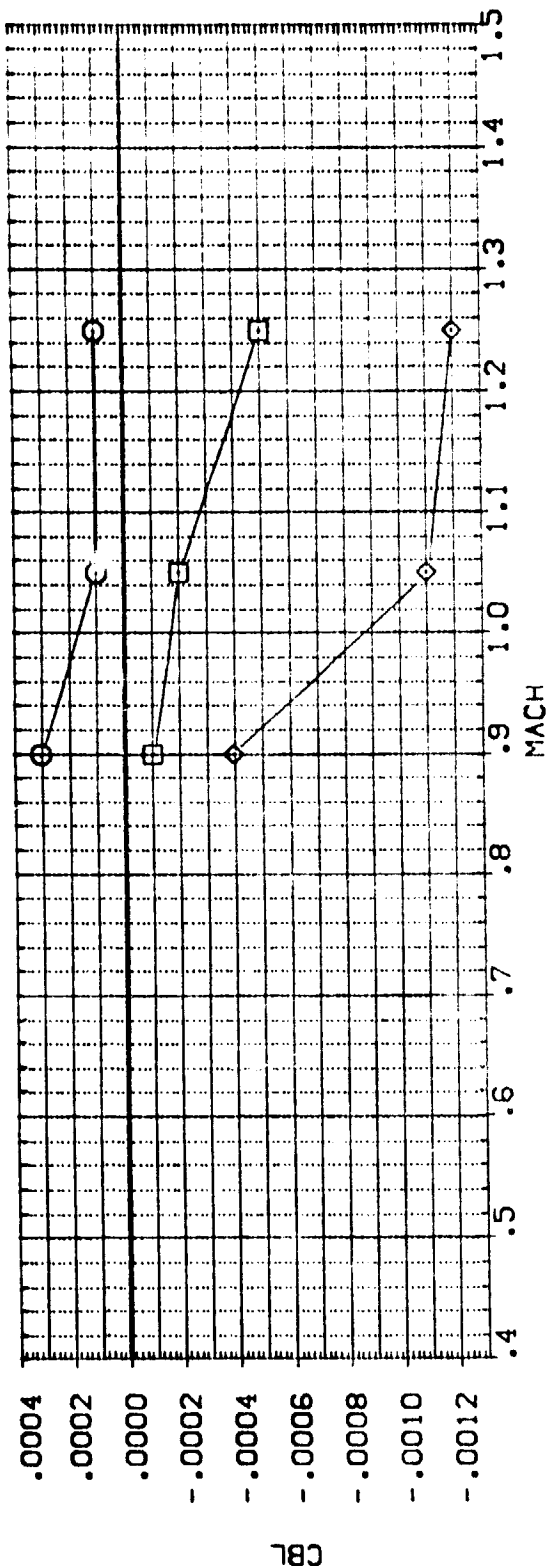


FORE AND AFT SPACER ON EXTERNAL TANK, EXTERNAL TANK DATA



MSFC 570(IA31F) (T9)/(03)/(S3/2)/(S3/2) Y1E (G83T71)

SYMBOL	BETA	PARAMETRIC VALUES					REFERENCE INFORMATION				
		ALPHA	CONF IG	RUDDER	ORBITAL	SPADIA	SF	LALF	BREF	YMRP	ZMRP
○	-9.000	.000	.000	.140	.000	.000	6.1980	5.3130	5.3130	2.5490	.0000
□	.000	.000	.000	.000	.500	.200	.0000	.0000	.0000	.0000	.0040
◇	9.000	.000	.000	.000	.000	.000	.0000	.0000	.0000	.0000	.0000



FORE AND AFT SPACER ON EXTERNAL TANK. EXTERNAL TANK DATA

(G83073)

MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) Y10

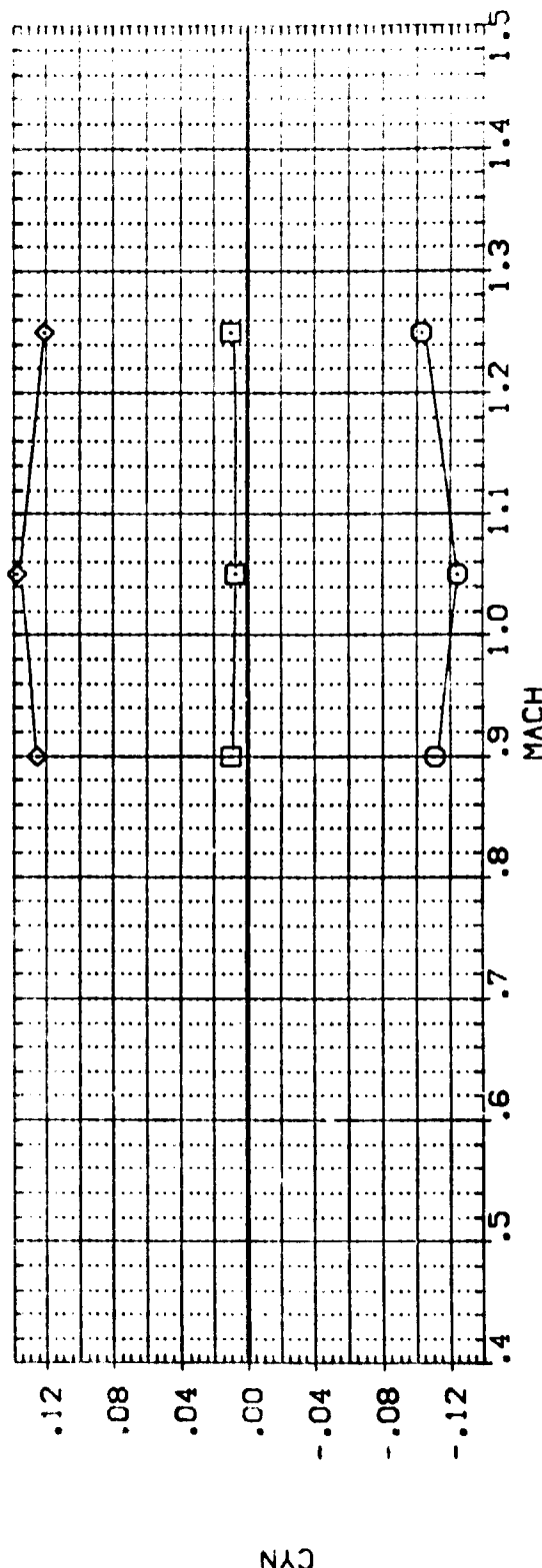
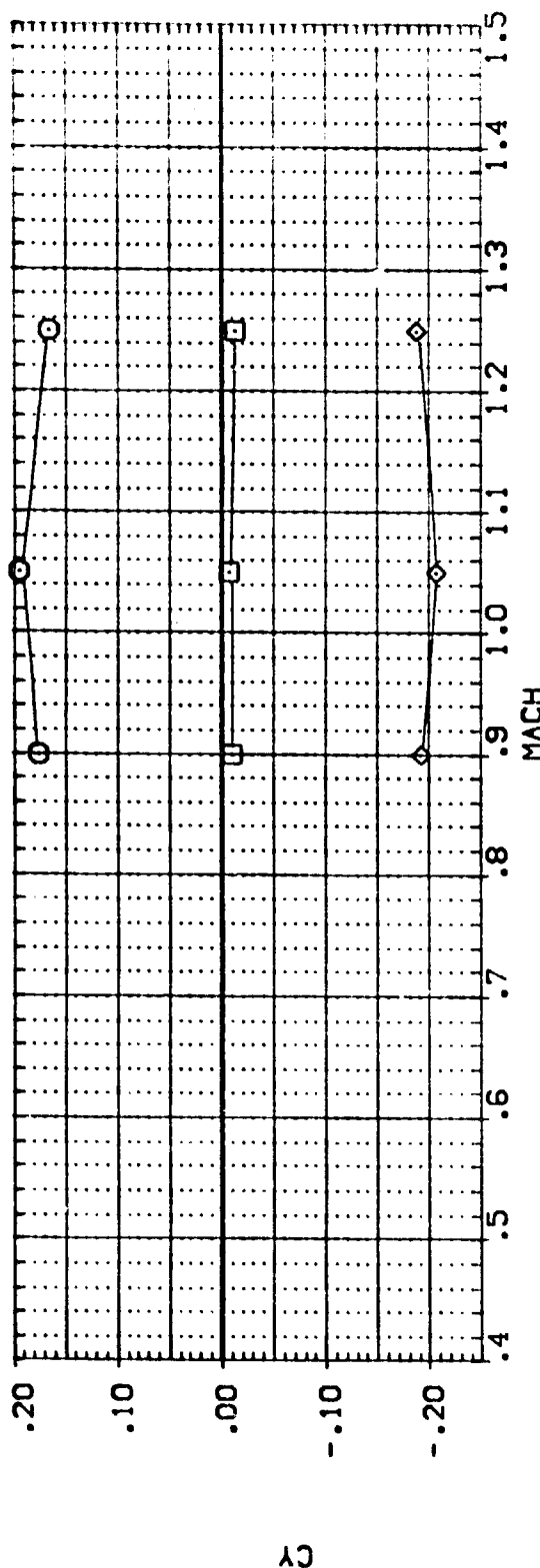
SYMBOL
 ○ □ ◇

BETA
 -8.000
 .000
 8.000

ALPHA
 DELTAZ
 X-SRB
 SPACER
 SPAGAP

PARAMETRIC VALUES
 .000 CONF1G 109.000
 .140 RUDDER .000
 .000 ORBITING .500
 21.220 SPADIA .200
 .050

REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130 IN.
 BREF 5.3130 IN.
 XMRP 2.5490 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0010



FORE AND AFT SPACER ON ORBITER, ORBITER DATA



(G83073)

MSFC 570(IA31F)(03)/(T9)/(S3/2)/(S3/2) Y10

SYMBOL
 ○ □ ◇

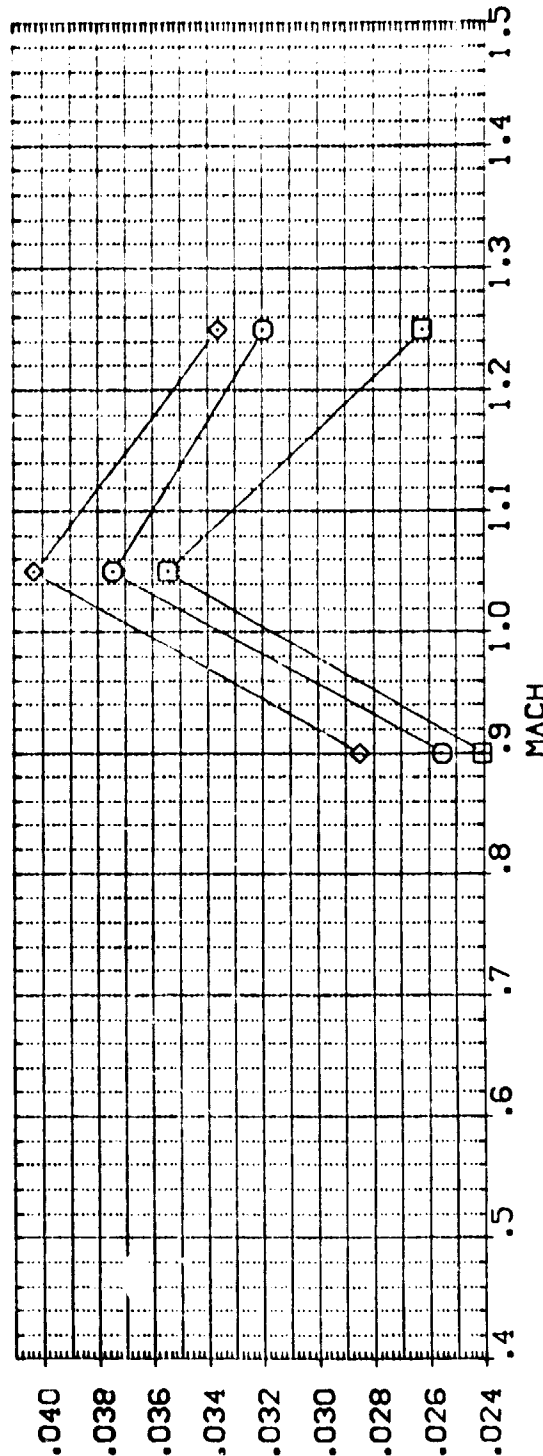
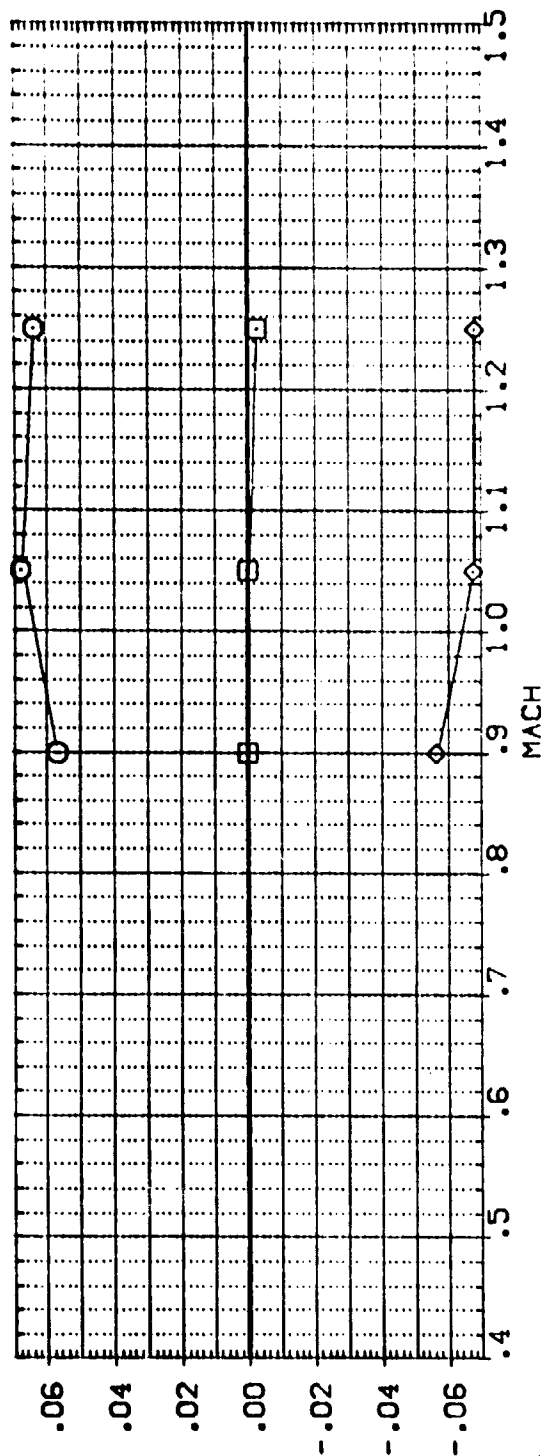
BETA
 -8.000
 .000
 8.000

PARAMETRIC VALUES
 ALPHA
 DELTAZ
 X-SRB
 SPACER
 SPAGAP

CONFIG
 RUDDER
 ORBINC
 SPADIA

109.000
 .000
 .500
 .200

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5450
 YMRP .0000
 ZMRP .0000
 SCALE .0040



FORE AND AFT SPACER ON ORBITER, ORBITER DATA

(G83T73)

MSFC 570(IA31F) (T9)/(03)/(S3/2)/(S3/2) Y10

SYMBOL

○ □ ◇

BETA

-8.000
.000
8.000

ALPHA

DELTA Z
X-SRB
SPACER

PARAMETRIC VALUES

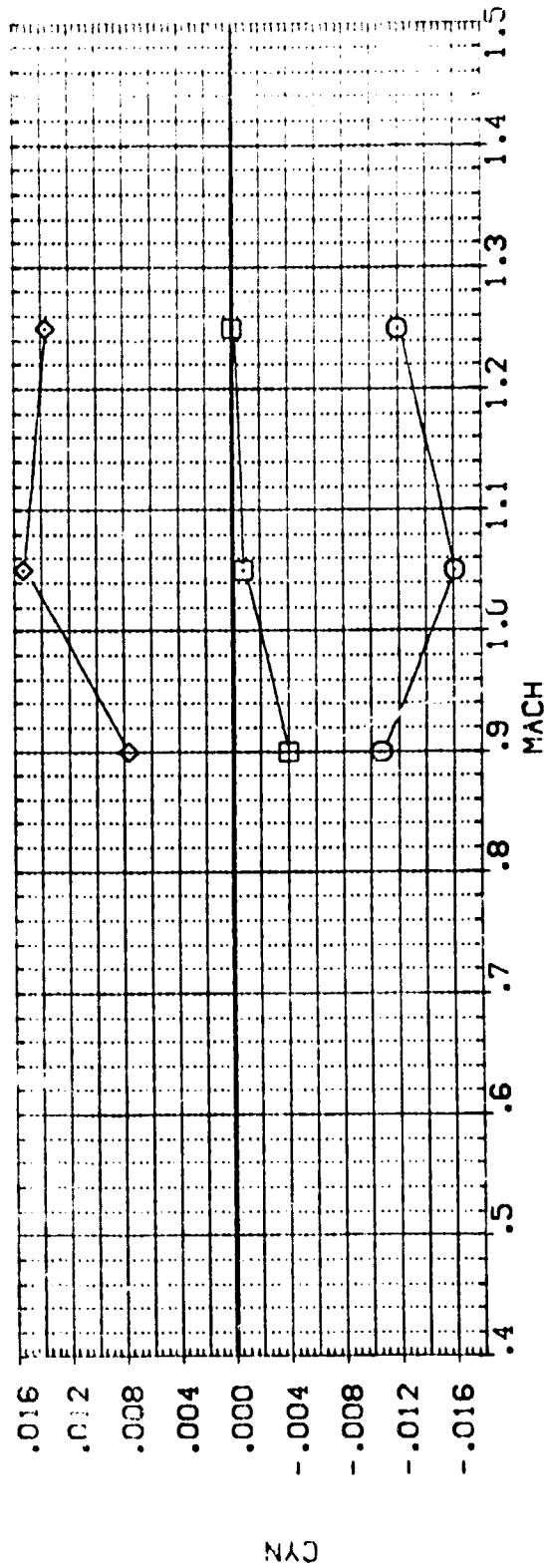
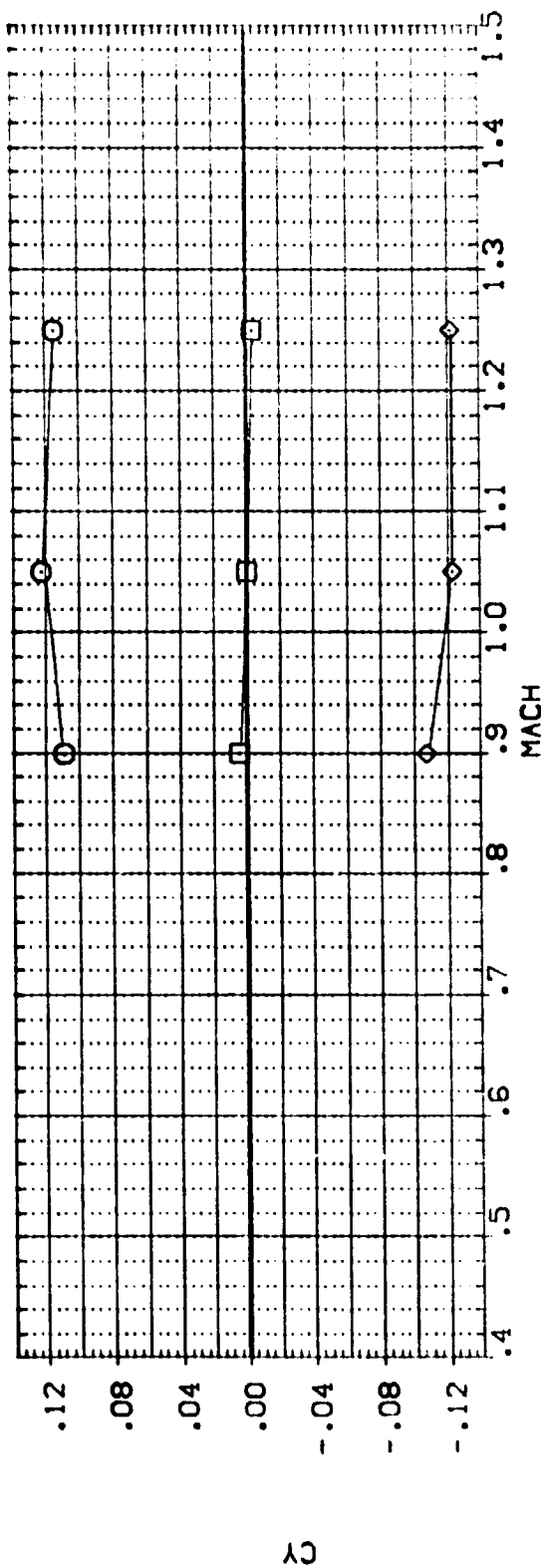
.000 CONF IG 209.000
.140 RUDDER
.000 CRB INC .500
21.220 SPADIA .200
.050 SPAGAP

REFERENCE INFORMATION

SREF 6.1980
LREF 5.3130
BREF 5.3130
XMRP 2.5490
YMRP .0000
ZMRP .0000
SCALE .0040

SO IN

ZZ
ZZ
ZZ
ZZ



FORE AND AFT SPACER ON ORBITER, EXTERNAL TANK DATA

(G83T73)

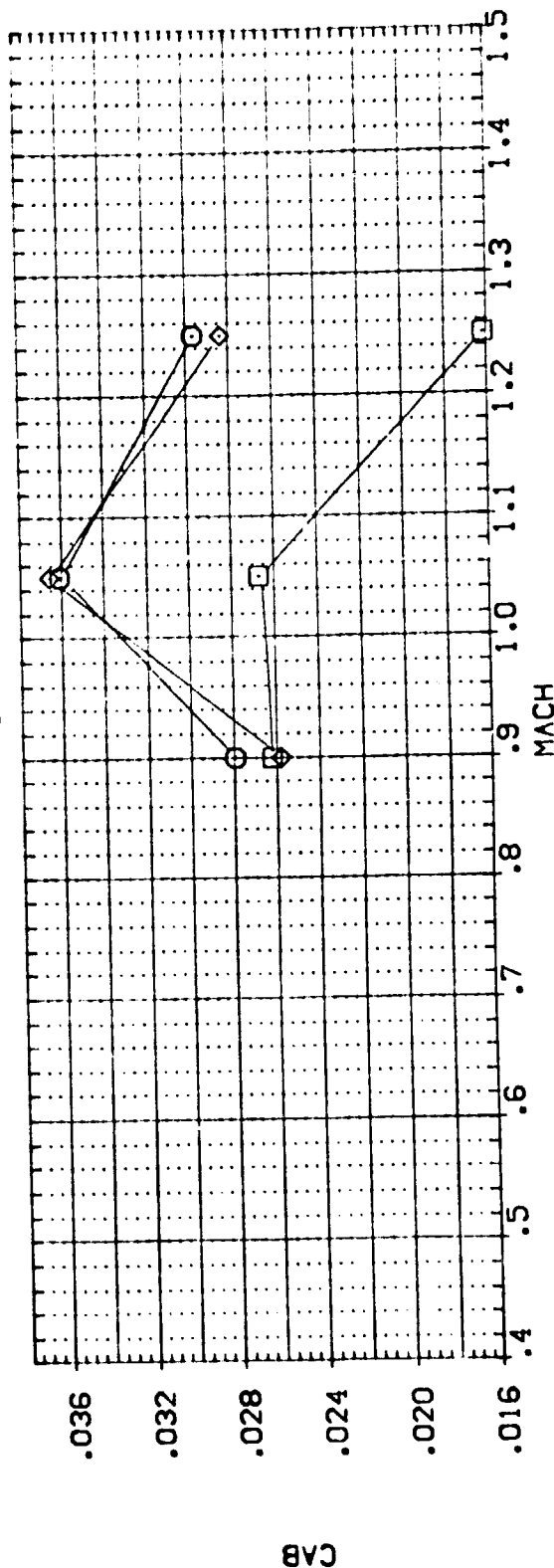
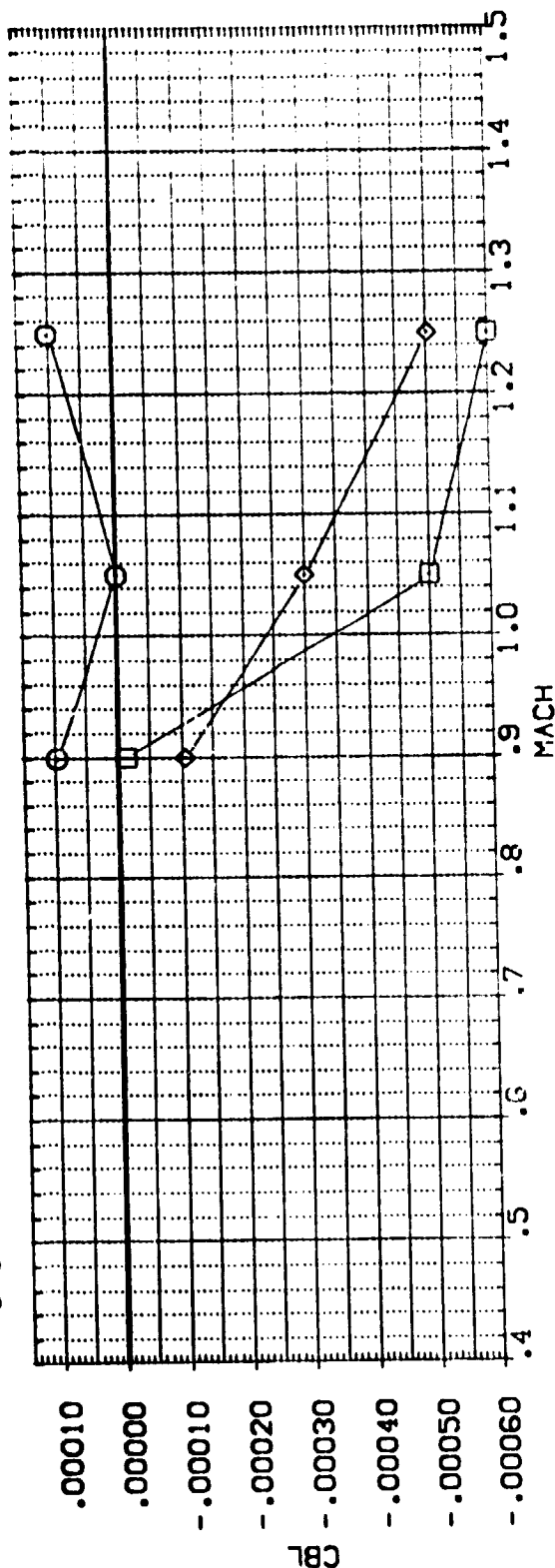
MSFC 570(IA31F) (T9)/(03)/(S3/2)/(S3/2) Y10

REFERENCE INFORMATION
 SREF 6.1980
 LREF 5.3130
 BREF 5.3130
 XMRP 2.5490
 YMRP .0000
 ZMRP .0000
 SCALE .0040

PARAMETRIC VALUES
 .000 CONFIG 209.000
 .140 RUDDER .000
 .000 ORBITAL .500
 21.220 SPADIA .200
 .050 SPAGAP

BETA ALPHA
 -8.000 DELTA Z
 .000 X-SRB
 8.000 SPACER

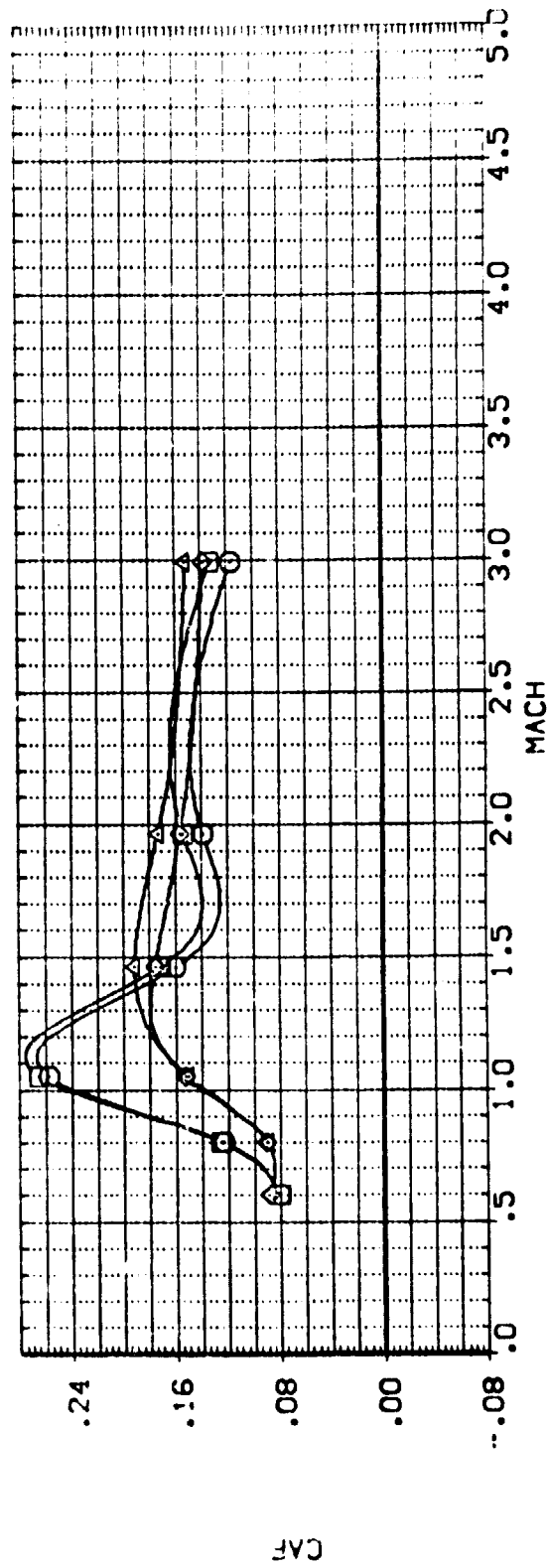
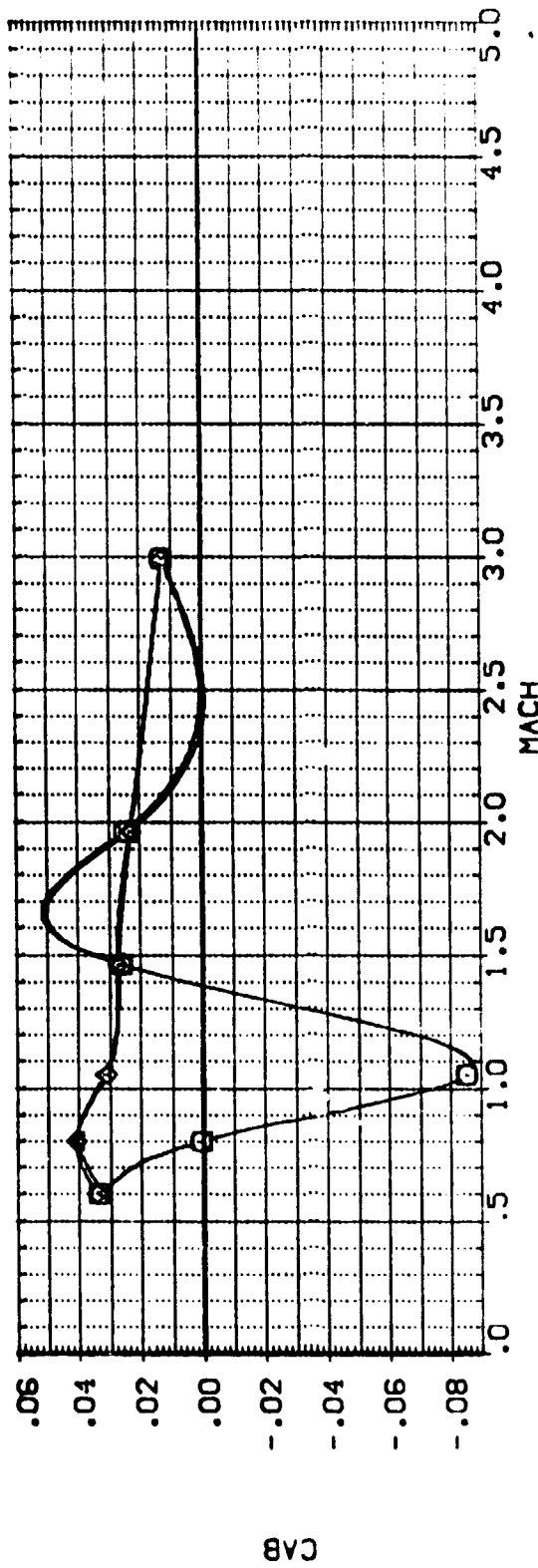
SYMBOL
 ○
 □
 ◇



FORE AND AFT SPACER ON ORBITER, EXTERNAL TANK DATA

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (183775) (111) (S3/2)/(03)/(S3/2)
 (183776) (112) (S3/2)/(03)/(S3/2)
 (183777) (113) (S3/2)/(03)/(S3/2)
 (183778) (113) (S3/2)/(03)/(S3/2)

ORIGIN DELTA Z SPADIA SPAGAP REFERENCE INFORMATION IN
 .500 .140 .000 6.1960 SQ
 .500 .140 .000 5.3130 Z
 .500 .140 .000 5.3130 Z
 .500 .140 .000 2.3450 Z
 .0000 .0000 .0000 .0000 Z
 .0040 .0040 .0040 .0040 Z
 SCALE

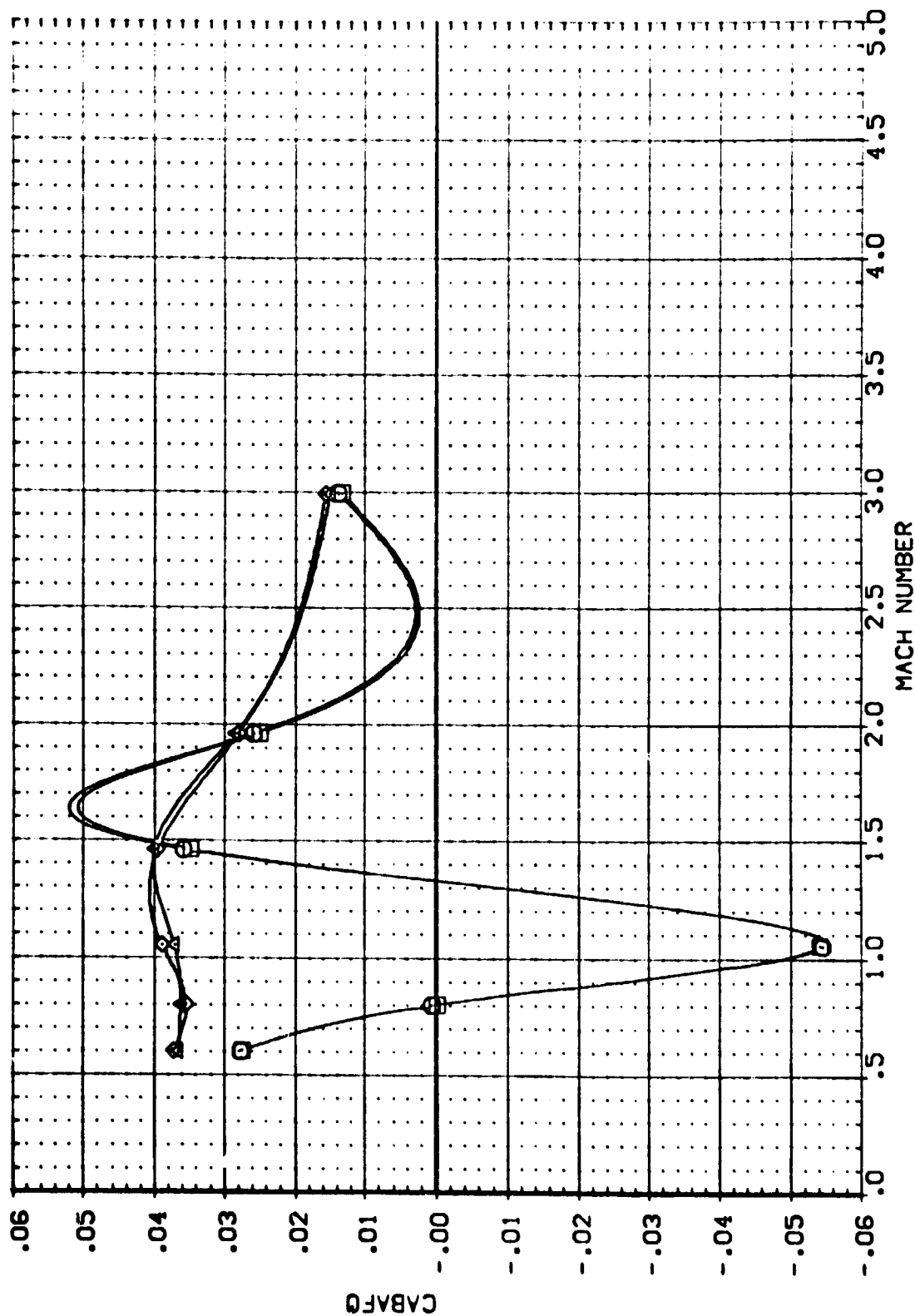


NOSE STUDY

(A) ALPHA = .00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITAL	DELTA Z	SPADIA	SPAGAP	REFERENCE INFORMATION			
(18575)	MSFC 570(A31F) (S3/2)/(03)/(T11)(S3/2)	.500	.140	.000	.000	SREF	.9720	SO	IN
(18576)	MSFC 570(A31F) (S3/2)/(03)/(T12)(S3/2)	.500	.140	.000	.000	LREF	5.3130	IN	IN
(18577)	MSFC 570(A31F) (S3/2)/(03)/(T7)(S3/2)	.500	.140	.000	.000	BREF	5.3130	IN	IN
(18578)	MSFC 570(A31F) (S3/2)/(03)/(T13)(S3/2)	.500	.140	.000	.000	XMRP	2.5490	IN	IN
						YMRP	.0000	IN	IN
						ZMRP	.0000	IN	IN
						SCALE	.0010		



NOSE STUDY

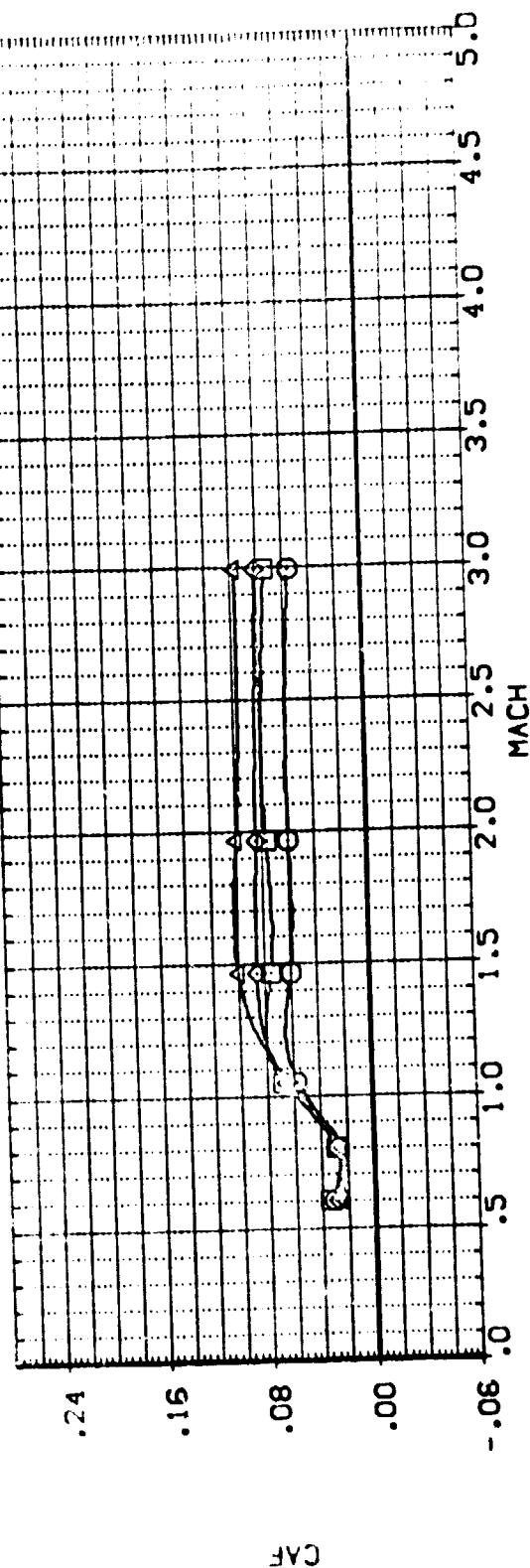
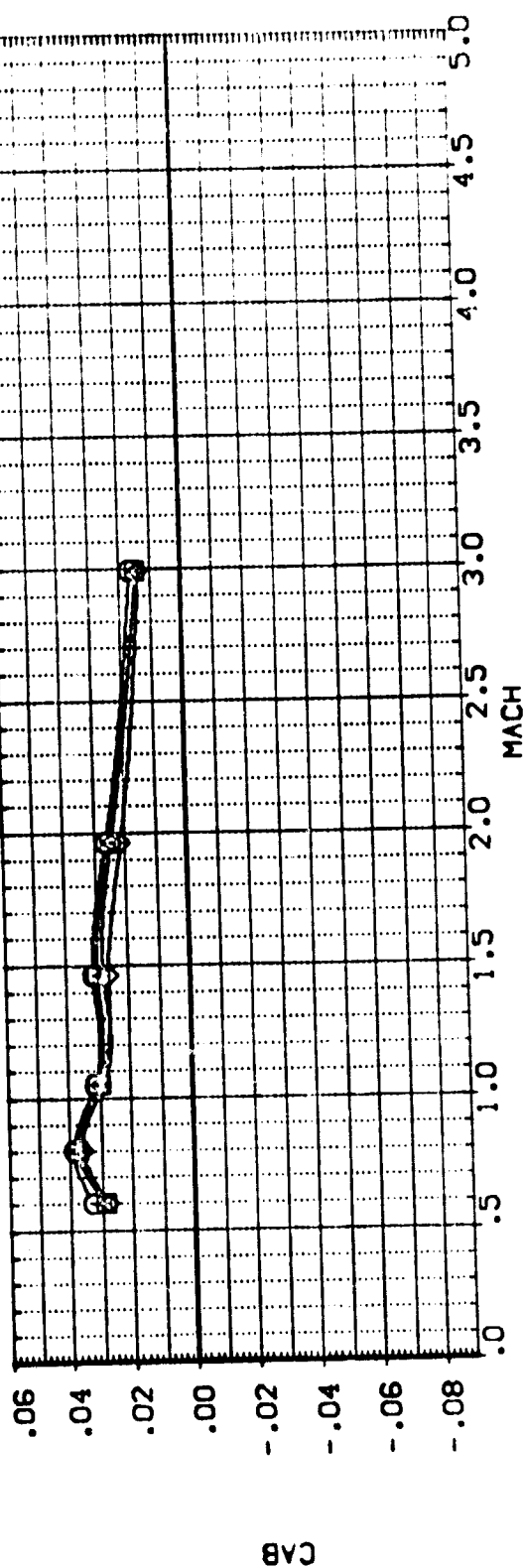
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DATA SET SYMBOL CONFIGURATION DESCRIPTION

MSFC 570(A31F) (T11)/(S3/2)/(O3)/(S3/2)
 MSFC 570(A31F) (T12)/(S3/2)/(O3)/(S3/2)
 MSFC 570(A31F) (T13)/(O3)/(S3/2)/(S3/2)
 MSFC 570(A31F) (T13)/(O3)/(S3/2)/(S3/2)

ORBITING DELTAZ SPAGAP SPAG1A
 .500 .140 .000
 .500 .140 .000
 .500 .140 .000
 .500 .140 .000

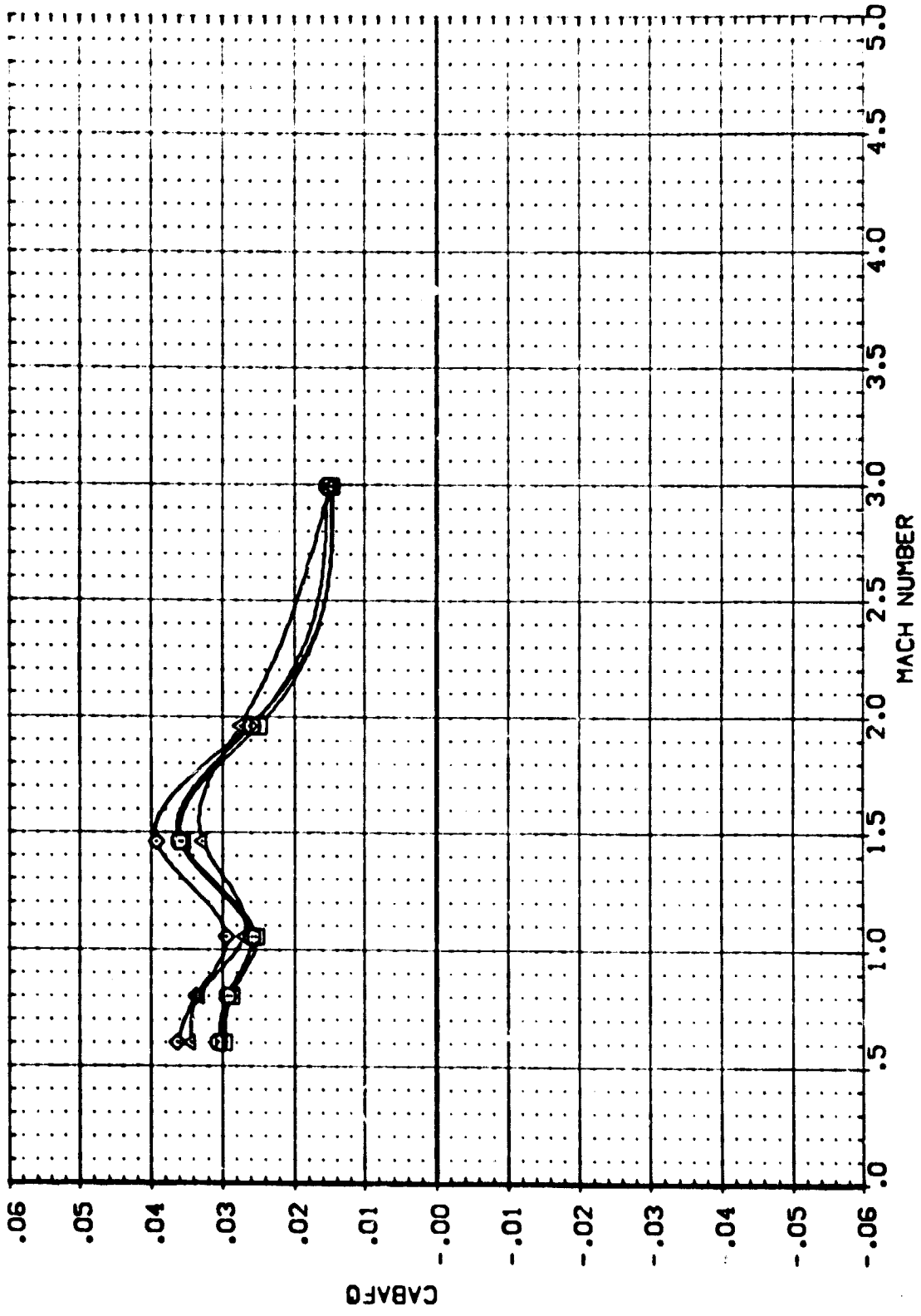
REFERENCE INFORMATION
 SREF 6.1980 SQ. IN
 LREF 5.3130
 BREF 5.3130
 XREF 2.5490
 YREF .0000
 ZREF .0000
 SCALE .0010



NOSE STUDY

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORBITALC	DELTA Z	SPADIA	SPADAP	REFERENCE INFORMATION
(183580)	MSFC 570(I A31F) (S3/2)/(03)/(T111)/(S3/2)	.500	.140	.000	.000	SREF .9720 50. IN
(183582)	MSFC 570(I A31F) (S3/2)/(03)/(T12)/(S3/2)	.500	.140	.000	.000	LREF 5.3130 IN.
(183583)	MSFC 570(I A31F) (S3/2)/(03)/(T7)/(S3/2)	.500	.140	.000	.000	BREF 5.3130 IN.
(183584)	MSFC 570(I A31F) (S3/2)/(03)/(T13)/(S3/2)	.500	.140	.000	.000	XREF 2.5490 IN.
						YREF .0000 IN.
						ZREF .0000 IN.
						SCALE .0010

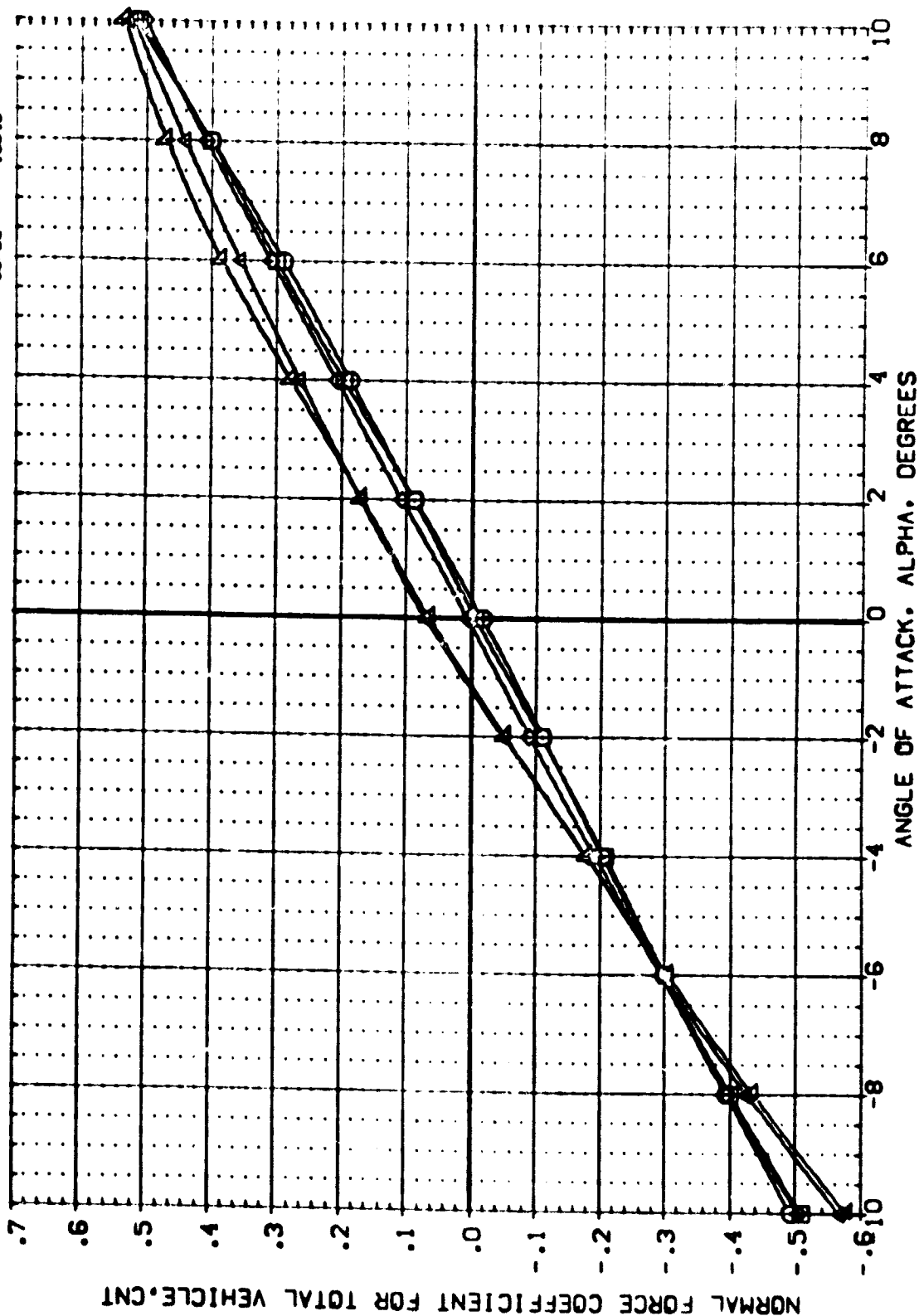


NOSE STUDY

[A]ALPHA = .00

MSFC TWT 570 COMBINED LOADS OF O.T.S.R- 03/T9/S3(F83002)

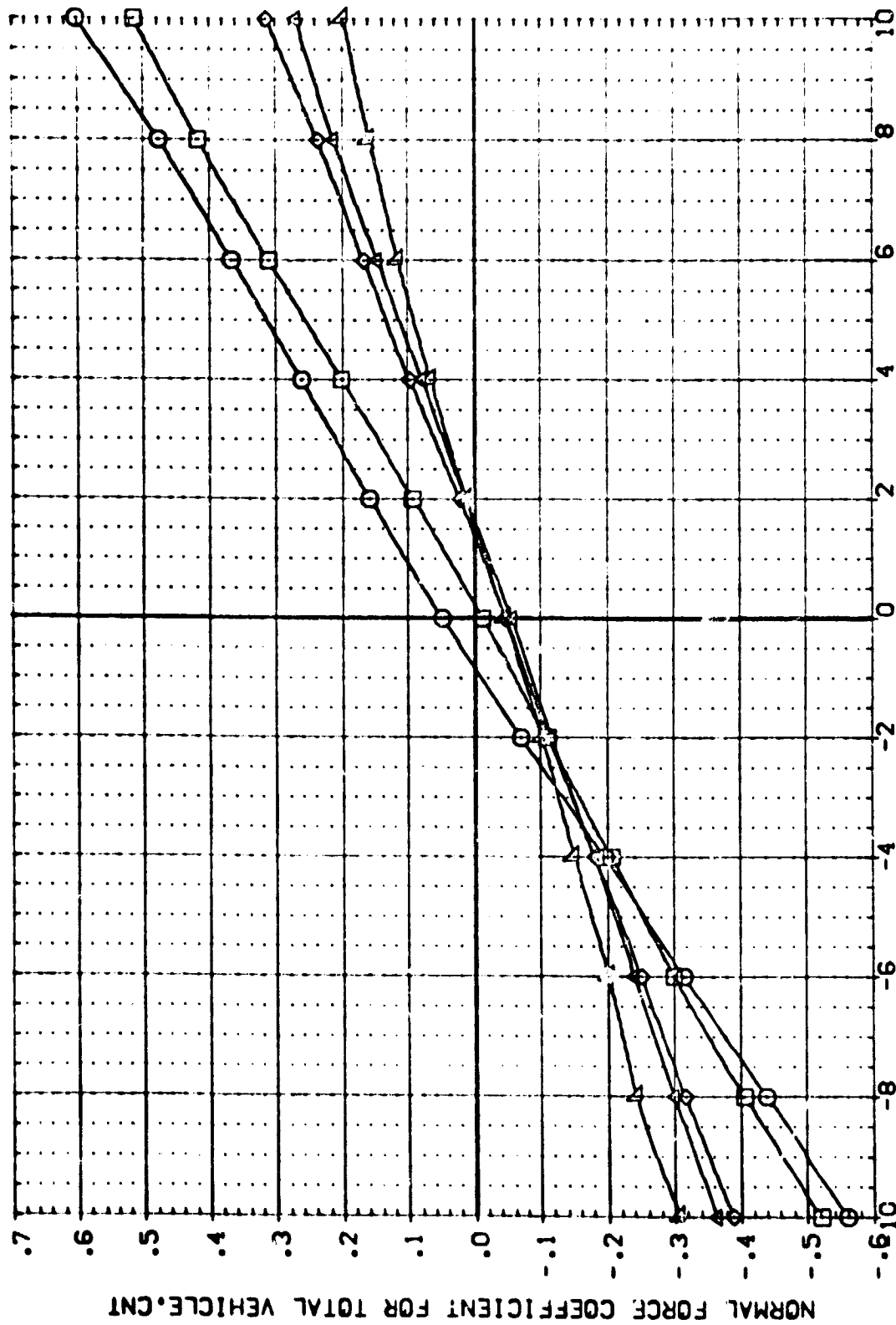
SINGL		MOCH	PARAMETRIC VALUES				REFERENCE INFORMATION			
○	.800	BETA	.000	DELTA Z	.140	SREF	6.1980	50. IN		
□	.800	RLODR	.000	X-SP	.000	LREF	5.3130	IN.		
◇	.900	OMBINC	.500	SP/CLR	.000	BREF	5.3130	IN.		
△	1.050	SPA01A	.000	SPA0AP	.000	YMRP	2.5490	IN.		
△	1.250				.000	ZMRP	.0000	IN.		
						SCALE	.0040	IN.		



STABILITY CHARACTERISTICS - TOTAL VEHICLE

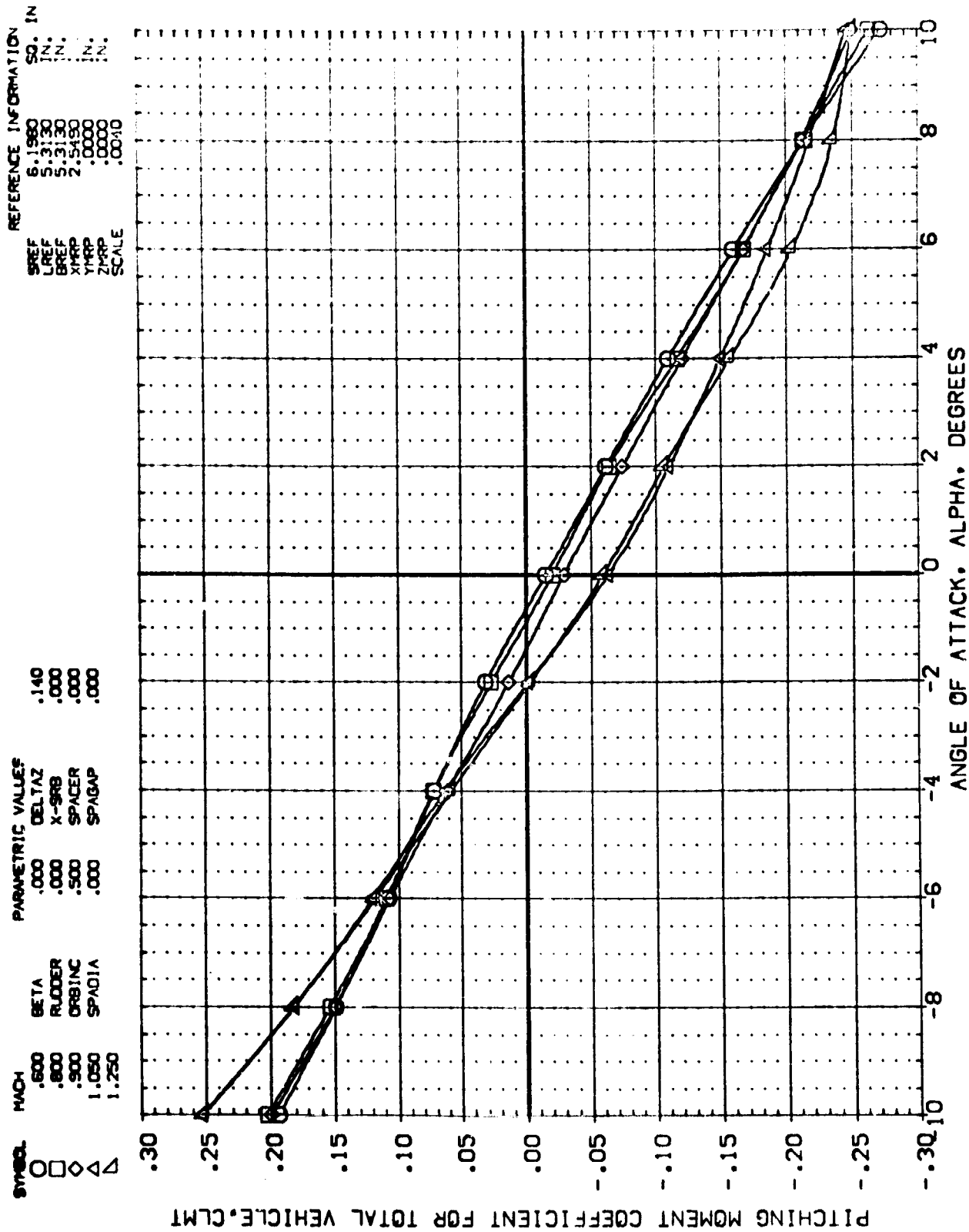
MSFC TWT 570 COMBINED LOADS OF O.T.S.R- 03/T9/S3(F83002)

SYMBL	MAON	BETA	RUDER	DELTA Z	PARAMETRIC VALUES	REF	LINE	REF	SCALE	REFERENCE INFORMATION	SO. IN
□	1.480	.000	.000	.000	.140	6.1980	5.3130	5.3130	5.3130	5.3130	5.3130
□	1.980	.000	.000	.000	.000	5.3130	5.3130	5.3130	5.3130	5.3130	5.3130
□	2.980	.000	.000	.000	.000	5.3130	5.3130	5.3130	5.3130	5.3130	5.3130
□	3.500	.000	.000	.000	.000	5.3130	5.3130	5.3130	5.3130	5.3130	5.3130
□	4.980	.000	.000	.000	.000	5.3130	5.3130	5.3130	5.3130	5.3130	5.3130



STABILITY CHARACTERISTICS - TOTAL VEHICLE

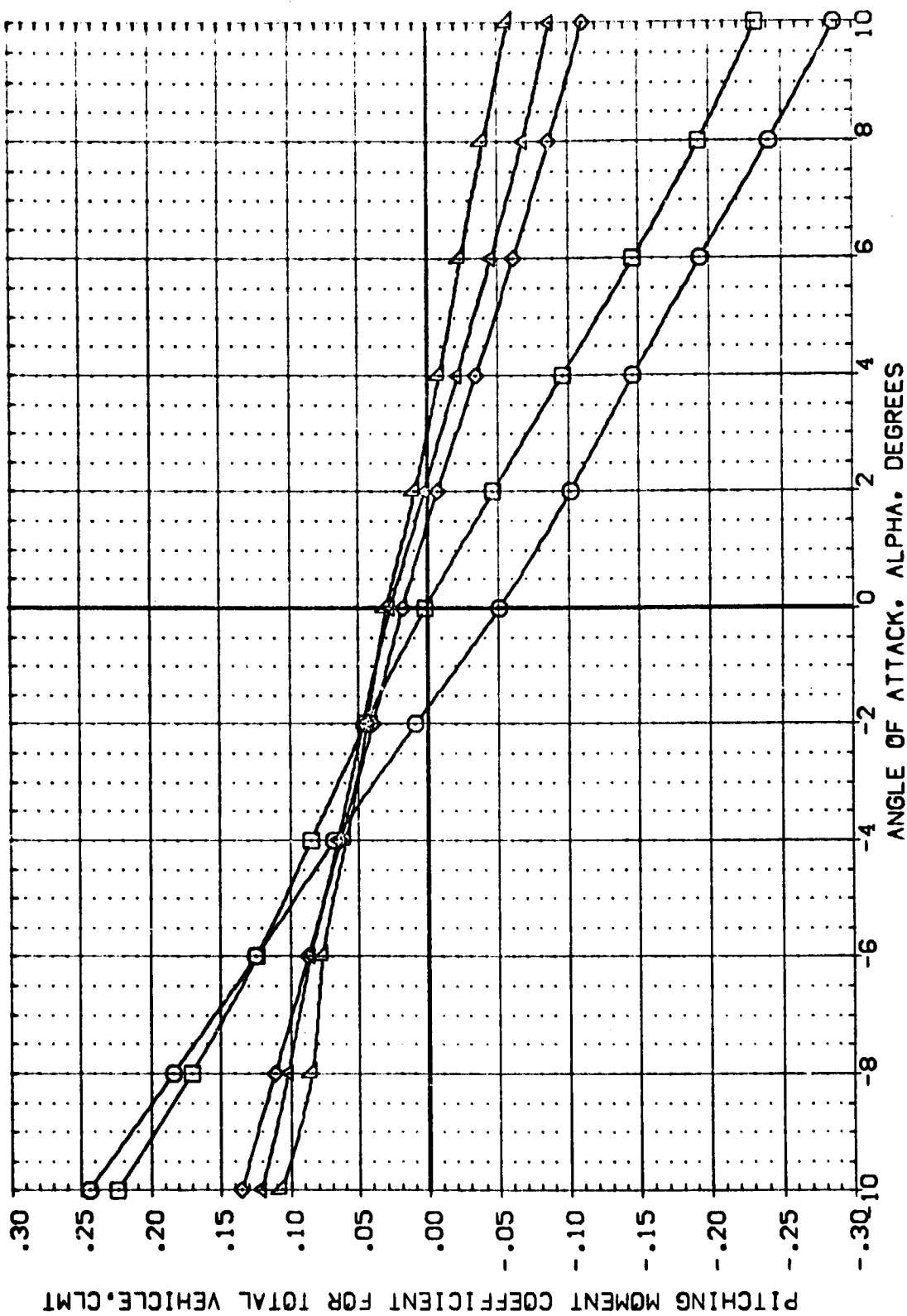
REFERENCE INFORMATION	
SREF	6.1980
LREF	5.3130
BREF	5.3130
XPRP	2.5450
YPRP	.0000
ZPRP	.0000
SCALE	.0010



STABILITY CHARACTERISTICS - TOTAL VEHICLE

MSFC TWT 570 COMBINED LOADS OF O.T.S.R- 03/T9/S3(F83002)

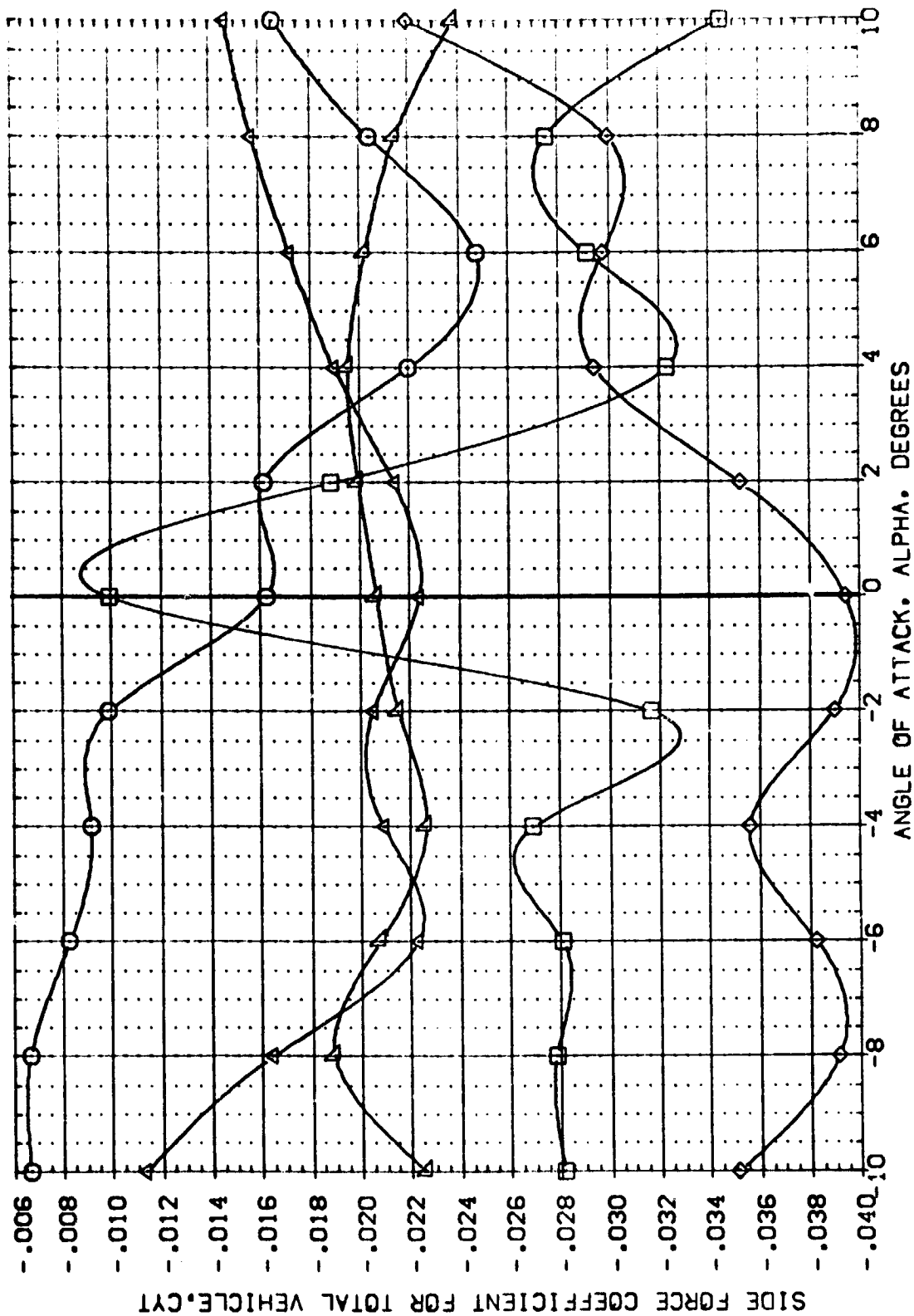
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○	1.460	.000	DELTA Z	SREF 6.1980
□	1.960	.000	X-SRB	LREF 5.3130
◇	2.960	.000	SPACER	BREF 5.3130
△	3.500	.000	SPAGAP	XMRP 2.5490
▽	4.960	.000		YMRP .0000
				ZMRP .0000
				SCALE .0040



STABILITY CHARACTERISTICS - TOTAL VEHICLE

MSFC TWT 570 COMBINED LOADS OF O.T.S.R- 03/T9/S3(F83002)

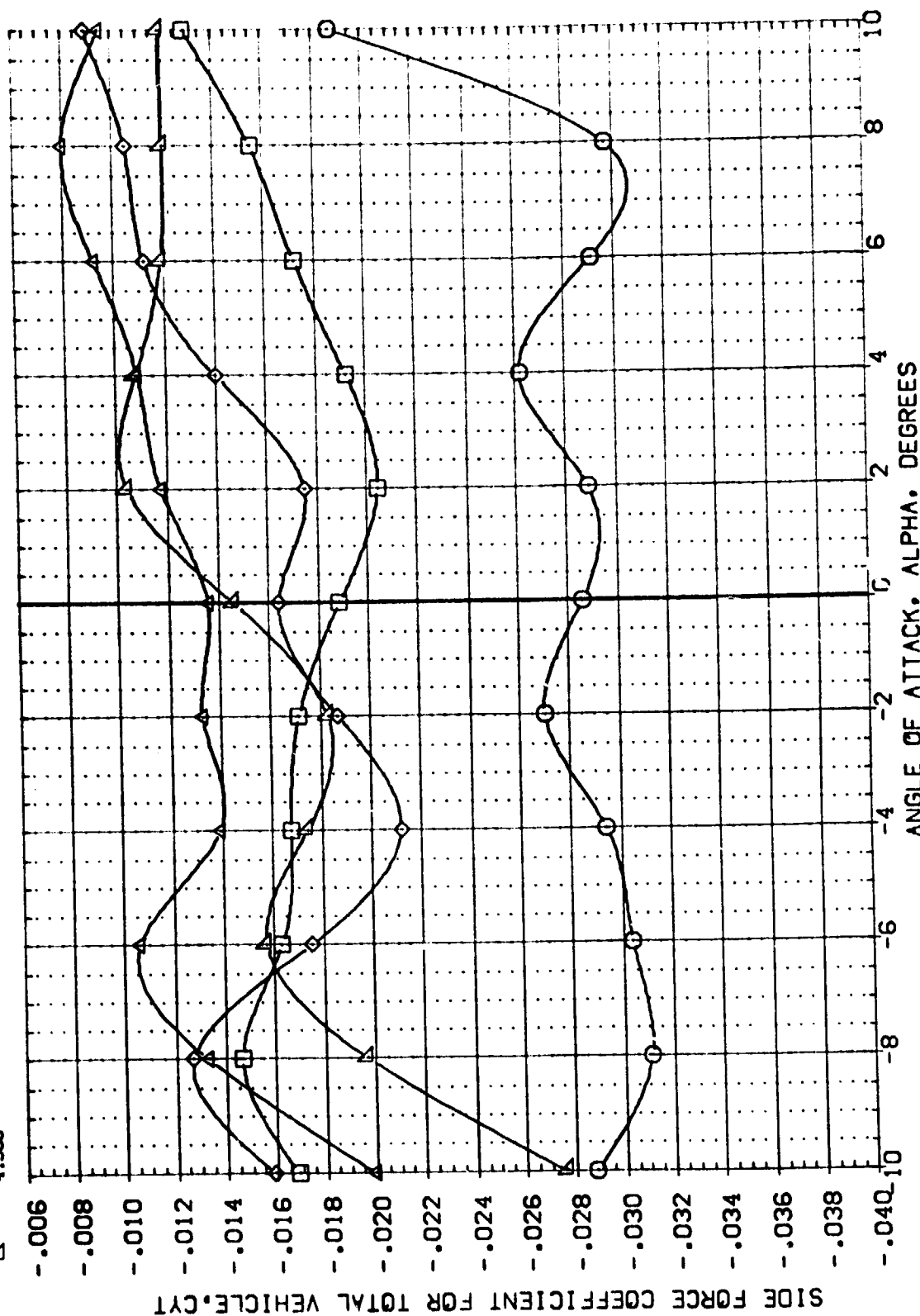
SYMBOL	MACH	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.800	RUDDER	.000 DELTA Z	SREF 6.1980
□	.800	ORBITAL	.000 X-SRB	LREF 5.3130
◇	.900	SPADIA	.500 SPACER	BREF 5.3130
△	1.050		.000 SPAGAP	XMRP 2.5480
▽	1.250			YMRP .0000
				ZMRP .0000
				SCALE .0010



STABILITY CHARACTERISTICS - TOTAL VEHICLE



SYMBOL	MACH	BETA	RUDDER	CRBINC	SPADIA
○	1.480	.000	DELTA Z	.000	.140
□	1.960	.000	X-SRB	.000	.000
◇	2.990	.500	SPACER	.000	.000
△	3.500	.000	SPAGAP	.000	.000
▽	4.960				



STABILITY CHARACTERISTICS - TOTAL VEHICLE